8300/8500

TORSION

STANDARD LIFT AND

LIGHT COMMERCIAL

MH

INSTALLATION INSTRUCTIONS AND OWNER'S MANUAL

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PLEASE DO NOT RETURN THIS PRODUCT TO THE STORE

Please Do Not Return This Product To The Store. Please call 1-866-569-3799 (Press Option 1) and follow the prompts to contact the appropriate customer service agent. They will be happy to handle any questions that you may have.

IMPORTANT NOTICES!

Wayne-Dalton highly recommends that you read and fully understand the Installation Instructions and Owner's Manual before you attempt this installation.

To avoid possible injury, read the enclosed instructions carefully before installing and operating the garage door. Pay close attention to all warnings and notes. After installation is complete, fasten this manual near garage door for easy reference.

DEFINITION OF DOOR HEIGHTS:

1. Door Heights less than or equal to 8'0" (< = 8'0") are considered Standard Lift Applications.

2. Door Heights greater than 8'0" (> 8'0") are considered Light Commercial Applications.

The complete Installation Instructions and Owner's Manual are available at no charge from:

Wayne-Dalton, a Division Of Overhead Door Corporation,

P.O. Box 67, Mt. Hope, OH., 44660, Or Online At **www.Wayne-Dalton.com**

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Part Number 351653 NEW 02/18/2013

Important Safety Instructions

DEFINITION OF KEY WORDS USED IN THIS MANUAL:

⚠ WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH; IF NOT AVOIDED, COULD RESULT IN SEVERE OR FATAL INJURY.

⚠ **CAUTION:** PROPERTY DAMAGE OR INJURY CAN RESULT FROM FAILURE TO FOLLOW INSTRUCTIONS.

IMPORTANT: REQUIRED STEP FOR SAFE AND PROPER DOOR OPERATION.

NOTE: Information assuring proper installation of the door.

READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING INSTALLATION. IF IN QUESTION ABOUT ANY OF THE PROCEDURES, DO NOT PERFORM THE WORK. INSTEAD, HAVE A TRAINED DOOR SYSTEMS TECHNICIAN DO THE INSTALLATION OR REPAIRS.

1. **READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.**
2. Wear protective gloves during installation to avoid possible cuts from sharp metal edges.
3. It is always recommended to wear eye protection when using tools, otherwise eye injury could result.
4. Avoid installing your new door on windy days. Door could fall during the installation causing severe or fatal injury.
5. Doors 12'-0" wide and over should be installed by two persons, to avoid possible injury.
6. Operate door only when it is properly adjusted and free from obstructions.
7. If a door becomes hard to operate, inoperative or is damaged, immediately have necessary adjustments and/ or repairs made by a trained door system technician using proper tools and instructions.
8. DO NOT stand or walk under a moving door, or permit anybody to stand or walk under an electrically operated door.
9. DO NOT place fingers or hands into open section joints when closing a door. Use lift handles/ gripping points when operating door manually.
10. DO NOT permit children to operate garage door or door controls. Severe or fatal injury could result should the child become entrapped between the door and the floor.
11. Due to constant extreme spring tension, do not attempt any adjustment, repair or alteration to any part of the door, especially to springs, spring brackets, bottom corner brackets, fasteners, counterbalance lift cables or supports. To avoid possible severe or fatal injury, have any such work performed by a trained door systems technician using proper tools and instructions.
12. On electrically operated doors, pull down ropes must be removed and locks must be removed or made inoperative in the open (unlocked) position.
13. Top section of door may need to be reinforced when attaching an electric opener. Check door and/ or opener manufacturer's instructions.
14. Visually inspect door and hardware monthly for worn and or broken parts. Check to ensure door operates freely.
15. Test electric opener's safety features monthly, following opener manufacturer's instructions.
16. NEVER hang tools, bicycles, hoses, clothing or anything else from horizontal tracks. Track systems are not intended or designed to support extra weight.
17. This door may not meet the building code wind load requirements in your area. For your safety, you will need to check with your local building official for wind load code requirements and building permit information.

After installation is complete, fasten this manual near the garage door.

IMPORTANT: STAINLESS STEEL OR PT2000 COATED LAG SCREWS MUST BE USED WHEN INSTALLING CENTER BEARING BRACKETS, END BRACKETS, JAMB BRACKETS, DRAWBAR OPERATOR MOUNTING/ SUPPORT BRACKETS AND DISCONNECT BRACKETS ON TREATED LUMBER (PRESERVATIVE-TREATED). STAINLESS STEEL OR PT2000 LAG SCREWS ARE NOT NECESSARY WHEN INSTALLING PRODUCTS ON UN-TREATED LUMBER.

NOTE: It is recommended that 5/16" lag screws are pilot drilled using a 3/16" drill bit, prior to fastening.

IMPORTANT: WHEN INSTALLING 5/16" LAG SCREWS USING AN ELECTRIC DRILL/ DRIVER, THE DRILL/ DRIVERS CLUTCH MUST BE SET TO DELIVER NO MORE THAN 200 IN-LBS OF TORQUE. FASTENER FAILURE COULD OCCUR AT HIGHER SETTINGS.

⚠ WARNING

PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE, THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY.

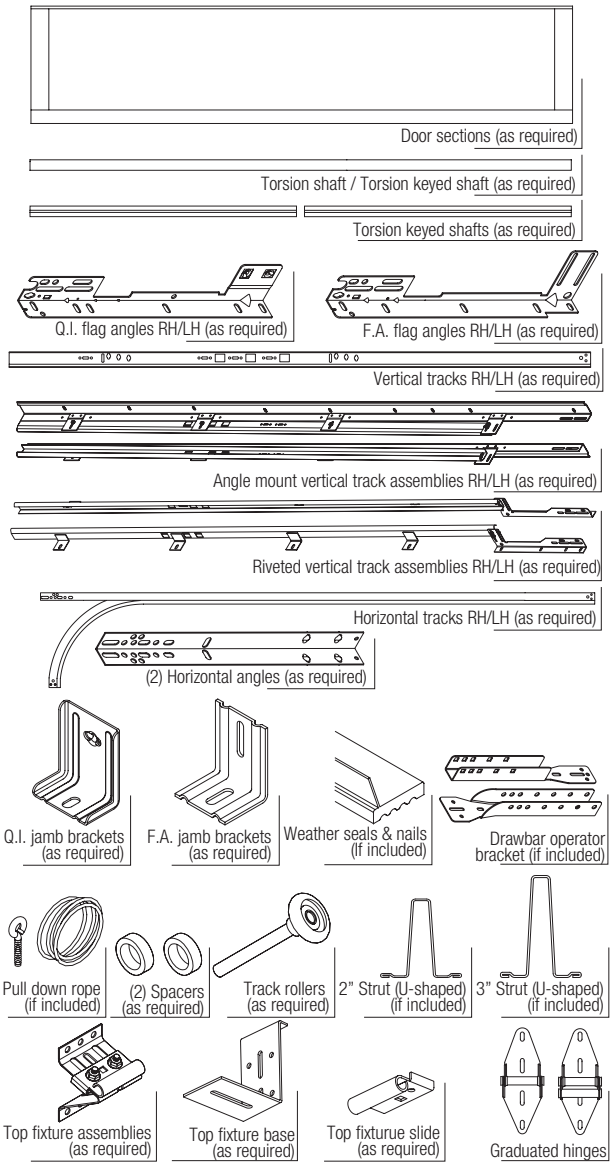
IMPORTANT: RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE BUILDING LOOKING OUT

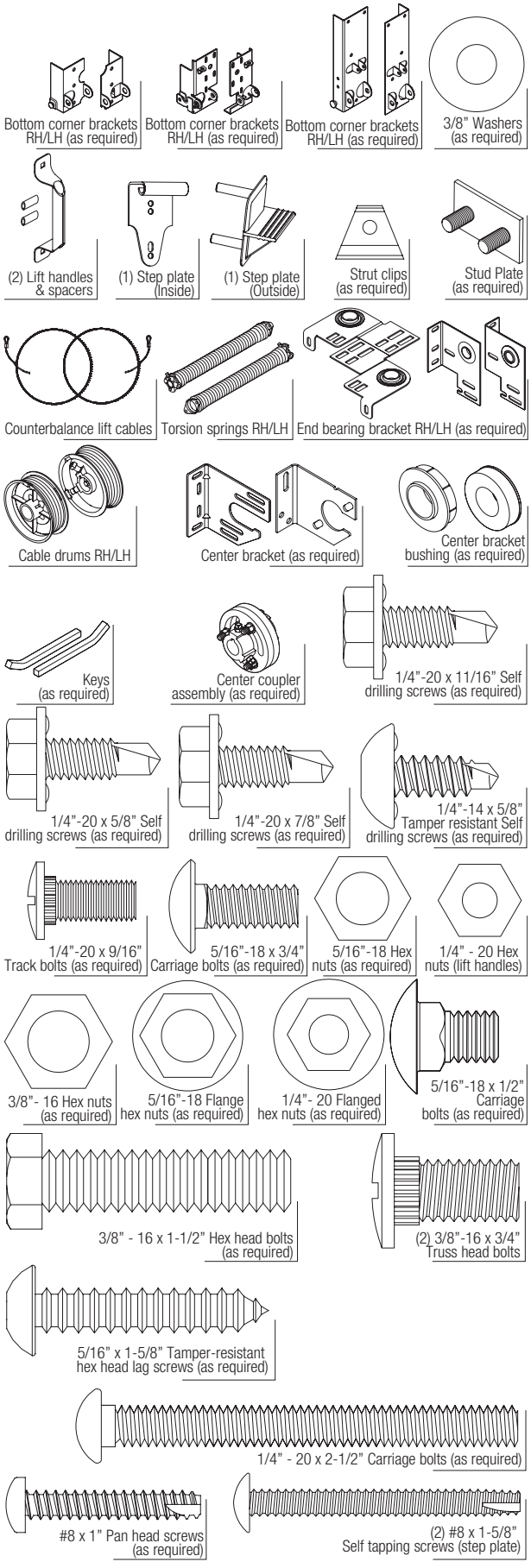
Tools Required

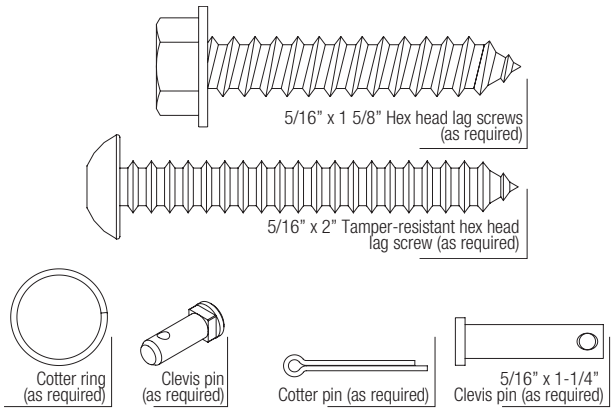
- Power drill
- Drill bits: 1/8", 3/16", 9/32", 7/16", 1/2"
- Ratchet wrench
- Socket driver: 7/16"
- Sockets: 7/16", 1/2", 9/16", 5/8"
- Phillips head screwdriver
- Locking Pliers
- (2) Vice clamps
- Wrenches: 3/8", 7/16", 1/2", 9/16", 5/8"
- 1/4" Torx bit
- Approved winding rods
- Hammer
- Tape measure
- Step Ladder
- Level
- Pencil
- Leather gloves
- Safety glasses

Package Contents

NOTE: Depending on the door model, some parts listed will not be supplied if not required. Rear Back Hangs may not be included with your door.


Door sections (as required)
Torsion shaft / Torsion keyed shaft (as required)
Torsion keyed shafts (as required)
Q.I. flag angles RH/LH (as required)
F.A. flag angles RH/LH (as required)
Vertical tracks RH/LH (as required)
Angle mount vertical track assemblies RH/LH (as required)
Riveted vertical track assemblies RH/LH (as required)
Horizontal tracks RH/LH (as required)
(2) Horizontal angles (as required)
Q.I. jamb brackets (as required)
F.A. jamb brackets (as required)
Weather seals & nails (if included)
Drawbar operator bracket (if included)
Pull down rope (if included)
(2) Spacers (as required)
Track rollers (as required)
2" Strut (U-shaped) (if included)
3" Strut (U-shaped) (if included)
Top fixture assemblies (as required)
Top fixture base (as required)
Top fixturue slide (as required)
Graduated hinges


Bottom corner brackets RH/LH (as required)
Bottom corner brackets RH/LH (as required)
Bottom corner brackets RH/LH (as required)
3/8" Washers (as required)
(2) Lift handles & spacers
(1) Step plate (Inside)
(1) Step plate (Outside)
Strut clips (as required)
Stud Plate (as required)
Counterbalance lift cables
Torsion springs RH/LH
End bearing bracket RH/LH (as required)
Cable drums RH/LH
Center bracket (as required)
Center bracket bushing (as required)
Keys (as required)
Center coupler assembly (as required)
1/4"-20 x 11/16" Self drilling screws (as required)
1/4"-20 x 5/8" Self drilling screws (as required)
1/4"-20 x 7/8" Self drilling screws (as required)
1/4"-14 x 5/8" Tamper resistant Self drilling screws (as required)
1/4"-20 x 9/16" Track bolts (as required)
5/16"-18 x 3/4" Carriage bolts (as required)
5/16"-18 Hex nuts (as required)
1/4" - 20 Hex nuts (lift handles)
3/8"- 16 Hex nuts (as required)
5/16"-18 Flange hex nuts (as required)
1/4"- 20 Flanged hex nuts (as required)
5/16"-18 x 1/2" Carriage bolts (as required)
3/8" - 16 x 1-1/2" Hex head bolts (as required)
(2) 3/8"-16 x 3/4" Truss head bolts
5/16" x 1-5/8" Tamper-resistant hex head lag screws (as required)
1/4" - 20 x 2-1/2" Carriage bolts (as required)
#8 x 1" Pan head screws (as required)
(2) #8 x 1-5/8" Self tapping screws (step plate)


5/16" x 1 5/8" Hex head lag screws (as required)
5/16" x 2" Tamper-resistant hex head lag screw (as required)
Cotter ring (as required)
Clevis pin (as required)
Cotter pin (as required)
5/16" x 1-1/4" Clevis pin (as required)

Door Section Identification

Section Quantity	Door Height	Type Of Sections							
		Bottom	Lock	Intermediate(s) Section					Top
				Int I	Int II	Int III	Int IV	Int V	Int VI	
3	6'0"	24"	24"	N/A						24"
4	6'0"	18"	18"	18"	N/A					18"
	6'3"	21"	18"	18"						18"
	6'6"	21"	18"	18"						21"
	6'9"	21"	21"	18"						21"
	7'0"	21"	21"	21"						21"
	7'3"	24"	21"	21"						21"
	7'3"	21"	21"	21"						24"
	7'6"	24"	21"	21"						24"
	7'9"	24"	24"	24"						21"
	7'9"	24"	24"	21"						24"
	8'0"	24"	24"	24"						24"
5	7'6"	18"	18"	18"	18"	N/A				18"
	7'9"	21"	18"	18"	18"					18"
	8'0"	21"	18"	18"	18"					21"
	8'3"	21"	21"	18"	18"					21"
	8'6"	21"	21"	18"	21"					21"
	8'9"	21"	21"	21"	21"					21"
	9'0"	24"	21"	21"	21"					21"
	9'0"	21"	21"	21"	21"					24"
	9'3"	24"	21"	21"	21"					24"
	9'6"	24"	24"	21"	21"					24"
	9'9"	24"	24"	21"	24"					24"
	10'0"	24"	24"	24"	24"					24"

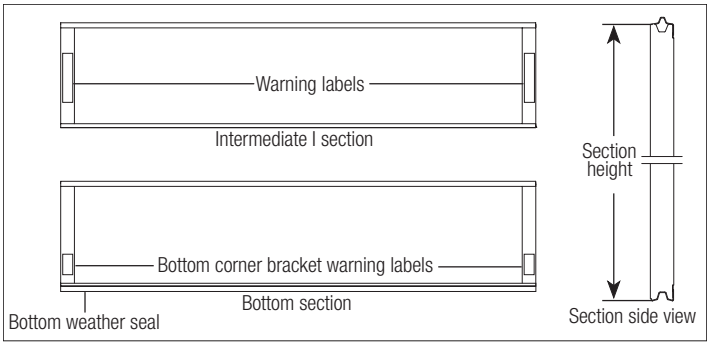
Section Quantity	Door Height	Type Of Sections								
		Bottom	Lock	Intermediate(s) Section						Top
				Int I	Int II	Int III	Int IV	Int V	Int VI	
6	9'0"	18"	18"	18"	18"	18"	N/A			18"
	9'3"	21"	18"	18"	18"	18"				18"
	9'6"	21"	18"	18"	18"	18"				21"
	9'9"	21"	21"	18"	18"	18"				21"
	10'0"	21"	21"	18"	18"	21"				21"
	10'2"	21"	21"	21"	18"	21"				21"
	10'5"	21"	21"	21"	21"	21"				21"
	10'8"	21"	21"	21"	21"	21"				24"
	11'0"	24"	21"	21"	21"	21"				24"
	11'3"	24"	24"	21"	21"	21"				24"
	11'6"	24"	24"	21"	21"	24"				24"
	11'9"	24"	24"	24"	21"	24"				24"
	12'0"	24"	24"	24"	24"	24"				24"
7	10'6"	18"	18"	18"	18"	18"	18"	N/A		18"
	10'9"	21"	18"	18"	18"	18"	18"			18"
	11'0"	21"	18"	18"	18"	18"	18"			21"
	11'3"	21"	21"	18"	18"	18"	18"			21"
	11'6"	21"	21"	18"	18"	18"	21"			21"
	11'8"	21"	21"	21"	18"	18"	21"			21"
	11'11"	21"	21"	21"	18"	21"	21"			21"
	12'2"	21"	21"	21"	21"	21"	21"			21"
	12'5"	21"	21"	21"	21"	21"	21"			24"
	12'8"	24"	21"	21"	21"	21"	21"			24"
	13'0"	24"	24"	21"	21"	21"	21"			24"
	13'3"	24"	24"	21"	21"	21"	24"			24"
	13'6"	24"	24"	24"	21"	21"	24"			24"
	13'9"	24"	24"	24"	21"	24"	24"			24"
	14'0"	24"	24"	24"	24"	24"	24"			24"
8	12'0"	18"	18"	18"	18"	18"	18"	18"	N/A	18"
	12'3"	21"	18"	18"	18"	18"	18"	18"		18"
	12'6"	21"	18"	18"	18"	18"	18"	18"		21"
	12'9"	21"	21"	18"	18"	18"	18"	18"		21"
	13'0"	21"	21"	18"	18"	18"	18"	21"		21"
	13'2"	21"	21"	21"	18"	18"	18"	21"		21"
	13'5"	21"	21"	21"	18"	18"	21"	21"		21"
	13'8"	21"	21"	21"	21"	18"	21"	21"		21"
	13'11"	21"	21"	21"	21"	21"	21"	21"		21"
9	13'6"	18"	18"	18"	18"	18"	18"	18"	18"	18"
	13'9"	21"	18"	18"	18"	18"	18"	18"	18"	18"
	14'0"	21"	18"	18"	18"	18"	18"	18"	18"	21"

When installing your door you must use sections of the appropriate height in the right stacking order. What sections heights you need to use in what order depends on the height of your door.

Unless your door is six sections in height, you will not receive an Intermediate III section.

The **BOTTOM SECTION** can be identified by the factory attached bottom astragal and by the bottom bracket warning labels on each end stile.

The **INTERMEDIATE I SECTION** may have a warning label attached to either right or left hand end stile of the section. This section is always the 3rd section from the bottom of the door.



Removing an Existing Door

IMPORTANT: COUNTERBALANCE SPRING TENSION MUST ALWAYS BE RELEASED BEFORE ANY ATTEMPT IS MADE TO START REMOVING AN EXISTING DOOR.

⚠ WARNING

A POWERFUL SPRING RELEASING ITS ENERGY SUDDENLY CAN CAUSE SEVERE OR FATAL INJURY. TO AVOID INJURY, HAVE A TRAINED DOOR SYSTEMS TECHNICIAN, USING PROPER TOOLS AND INSTRUCTIONS, RELEASE THE SPRING TENSION.

For detailed information see supplemental instructions "Removing an Existing Door/ Preparing the Opening". These instructions are not supplied with the door, but are available at no charge from Wayne-Dalton, A Division Of Overhead Door Corporation, P.O. Box 67, Mt. Hope, OH., 44660, or at **www.Wayne-Dalton.com**.

Preparing the Opening

IMPORTANT: IF YOU JUST REMOVED YOUR EXISTING DOOR OR YOU ARE INSTALLING A NEW DOOR, COMPLETE ALL STEPS IN PREPARING THE OPENING.

To ensure secure mounting of track brackets, side and center brackets, or steel angles to new or retro-fit construction, it is recommended to follow the procedures outlined in DASMA technical data sheets #156, #161 and #164 at **www.dasma.com**.

The inside perimeter of your garage door opening should be framed with wood jamb and header material. The jambs and header must be securely fastened to sound framing members. It is recommended that 2" x 6" lumber be used. The jambs must be plumb and the header level. The jambs should extend a minimum of 12" (305 mm) above the top of the opening for Torsion counterbalance systems. For low headroom applications, the jambs should extend to the ceiling height. Minimum side clearance required, from the opening to the wall, is 3-1/2" (89 mm).

IMPORTANT: CLOSELY INSPECT JAMBS, HEADER AND MOUNTING SURFACE. ANY WOOD FOUND NOT TO BE SOUND, MUST BE REPLACED.

For Torsion counterbalance systems, a suitable mounting surface (2" x 6") must be firmly attached to the wall, above the header at the center of the opening.

NOTE: Drill a 3/16" pilot hole in the mounting surface to avoid splitting the lumber. Do not attach the mounting surface with nails.

WEATHERSTRIPS (MAY NOT BE INCLUDED):

Depending on the size of your door, you may have to cut or trim the weatherstrips (if necessary) to properly fit into the header and jambs.

NOTE: If nailing product at 40°F or below, pre-drilling is required.

NOTE: Do not permanently attach weatherstrips to the header and jambs at this time.

For Quick Install track: For the header, align the weatherstrip with the inside edge of the header and temporarily secure it to the header with equally spaced nails. Starting at either side of the jamb, fit the weatherstrip up tight against the temporarily attached weatherstrip in the header and flush with the inside edge of the jamb. Temporarily secure the weatherstrip with equally spaced nails. Repeat for other side. This will keep the bottom section from falling out of the opening during installation. Equally space nails approximately 12" to 18" apart.

For other tracks: For the header, align the weatherstrip 1/8" to 1/4" inside the header edge, and temporarily secure it to the header with equally spaced nails. Starting at either side of the jamb, fit the weatherstrip up tight against the temporarily attached weatherstrip in the header and 1/8" to 1/4" inside the jamb edge. Temporarily secure the weatherstrip with equally spaced nails. Repeat for other side. This will keep the bottom section from falling out of the opening during installation. Equally space nails approximately 12" to 18" apart.

Headroom requirement: Headroom is defined as the space needed above the top of the door for tracks, springs, etc. to allow the door to open properly. If the door is to be motor operated, 2-1/2" (64 mm) of additional headroom is required.

NOTE: 6" low headroom conversion kit is available for 12" radius only. Contact your local

Wayne-Dalton dealer.

Backroom requirement: Backroom is defined as the distance needed from the opening back into the garage to allow the door to open fully.

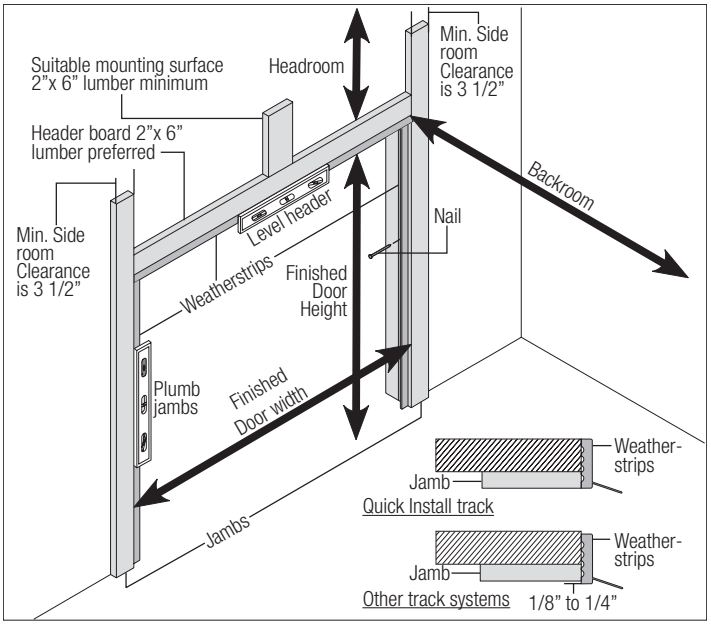
***NOTE:** For door heights from 10'1" to 14'0", refer to your operator manufacture installation instructions for appropriate depth into room.

BACKROOM REQUIREMENTS

Door Height	Track	Manual Lift	Motor Operated
6'0" to 7'0"	12", 15" Radius	102-1/2" (2604 mm)	125" (3175 mm)
7'1" to 8'0"		114-1/2" (2909 mm)	137" (3480 mm)
8'1" to 9'0"		127" (3226 mm)	168" (4267 mm)
9'1" to 10'0"		139" (3531 mm)	168" (4267 mm)
10'1" to 12'0"		163-1/2" (4153 mm)	See *NOTE
12'1" to 14'0"		187-1/2" (4763 mm)	See *NOTE

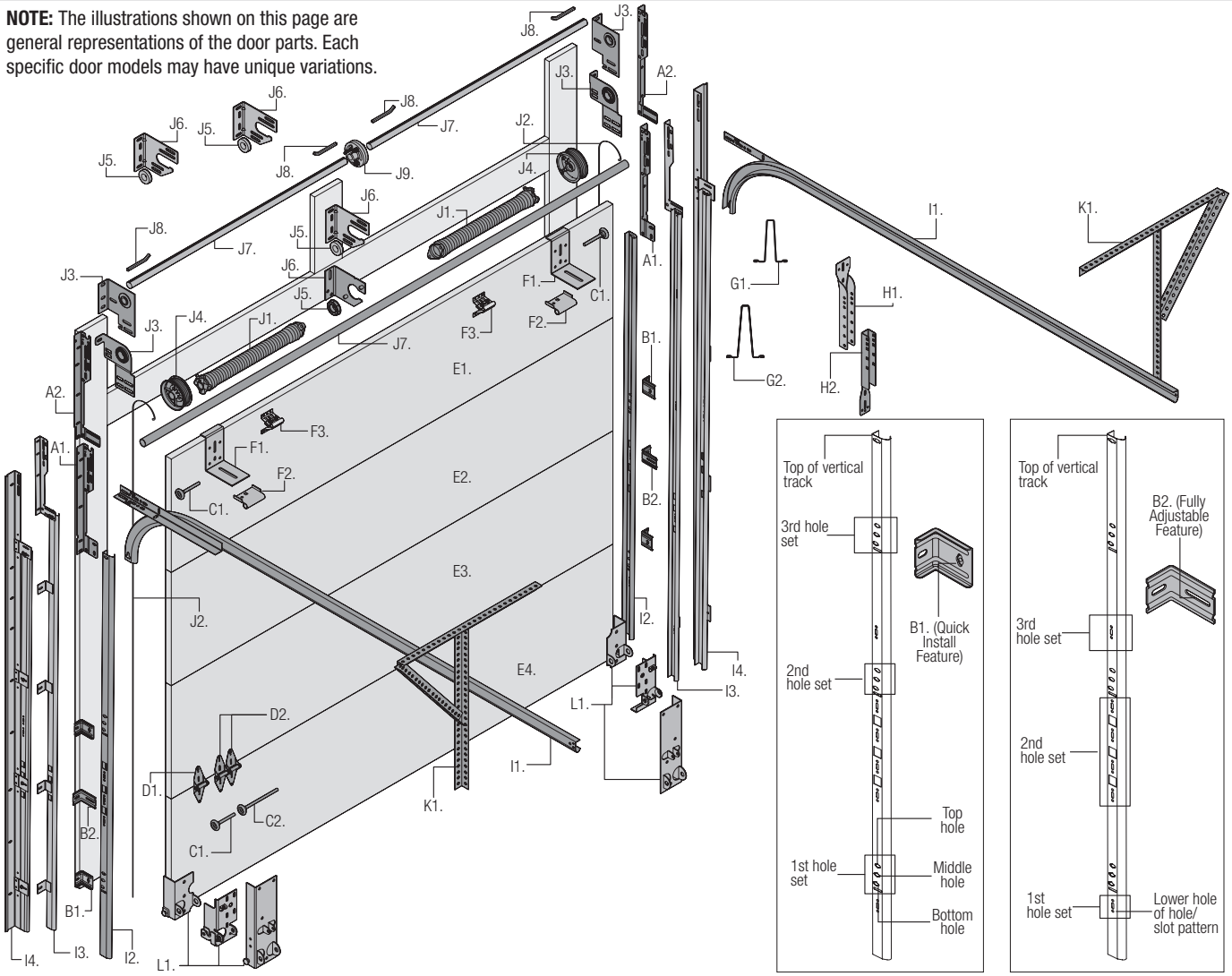
HEADROOM REQUIREMENTS

Track Type	Space Needed
12" Radius	12-1/2" (318 mm)
15" Radius	14-1/2" (368 mm)



PARTS BREAKDOWN

NOTE: The illustrations shown on this page are general representations of the door parts. Each specific door models may have unique variations.



A. FLAG ANGLES (AS REQUIRED):

A1. Quick Install (Q.I.) Flag Angles

A2. Fully Adjustable (F.A.) Flag Angles

B. JAMB BRACKETS (AS REQUIRED):

B1. Quick Install (Q.I.) Jamb Brackets

B2. Fully Adjustable (F.A.) Jamb Brackets

C. TRACK ROLLERS (AS REQUIRED):

C1. Short Stem Track Rollers

C2. Long Stem Track Rollers

D. GRADUATED END HINGES:

D1. Single Graduated End Hinges (S.E.H.), Industry Standard

D2. Double Graduated End Hinges (D.E.H.), Industry Standard

E. STACKED SECTIONS:

E1. Top Section

E2. Intermediate(s) Section

E3. Lock Section

E4. Bottom Section

F. TOP FIXTURE (AS REQUIRED):

F1. Top Fixture Bases - (L-Shaped)

F2. Top Fixture Slides - (L-Shaped)

F3. Top Fixture Assemblies

G. STRUT(S) (AS REQUIRED):

G1. 2" Strut (U-shaped)

G2. 3" Strut (U-shaped)

H. DRAWBAR OPERATOR BRACKET (FOR TROLLEY OPERATED DOORS):

H1. Top Halve Drawbar Operator Bracket

H2. Bottom Halve Drawbar Operator Bracket

H3. Drawbar Operator Bracket (Supplied By Others)

I. TRACKS (AS REQUIRED):

I1. Left Hand and Right Hand Horizontal Track Assemblies

I2. Left Hand and Right Hand Vertical Tracks

I3. Left Hand and Right Hand Riveted Vertical Track Assemblies

I4. Left Hand and Right Hand Angle Mount Vertical Track Assemblies

J. TORSION SPRING ASSEMBLY (AS REQUIRED):

J1. Left Hand and Right Hand Torsion Springs (As Required)

J2. Counterbalance Lift Cables

J3. Left Hand and Right Hand End Bearing Brackets (As Required)

J4. Left Hand and Right Hand Cable Drums

J5. Center Bushing / Center Bearing (As Required)

J6. Center Bracket(s) (As Required)

J7. Torsion Shaft / Torsion Keyed Shaft / Torsion Keyed Shafts (As Required)

J8. Keys (As Required)

J9. Center Coupler Assembly (As Required)

K. REAR BACK HANGS:

K1. Left Hand and Right Hand Rear Back Hang Assemblies

L. BOTTOM CORNER BRACKETS (AS REQUIRED):

L1. Left Hand and Right Hand Bottom Corner Brackets

INSTALLATION

Before installing your door, be certain that you have read and followed all of the instructions covered in the pre-installation section of this manual. Failure to do so may result in an improperly installed door.

NOTE: Reference TDS 160 for general garage door terminology at **www.dasma.com**.

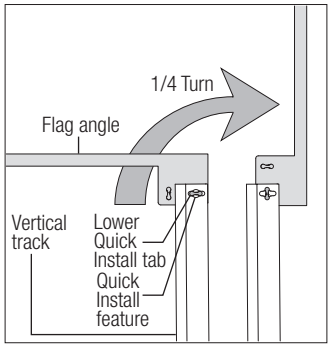
1 Quick Install Flag Angles

Tools Required: None

NOTE: If you have Fully Adjustable Flag Angles, Riveted Track or Angle Mount Track, skip this step.

NOTE: Flag angles are right and left handed.

Place the lower Quick Install tab of the left hand flag angle in the Quick Install feature of the left hand vertical track. Give the flag angle 1/4 turn to lock in place. Repeat for other side.



2 Fully Adjustable Flag Angles

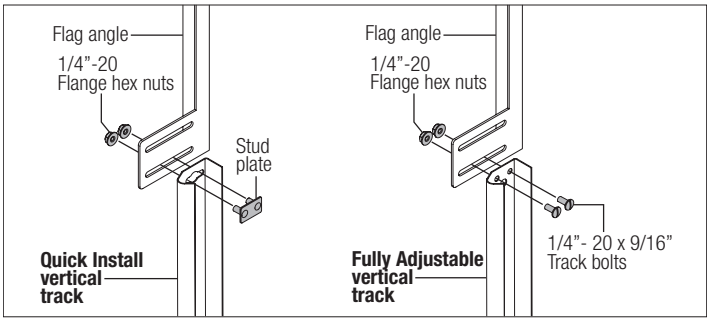
Tools Required: None

NOTE: If you have Quick Install flag angles, Riveted Track or Angle Mount Track, skip this step.

NOTE: Flag angles are right and left handed.

If you have Quick Install vertical tracks, hand tighten the left hand flag angle to the left hand vertical track using (1) stud plate and (2) 1/4" - 20 flange hex nuts. Repeat for the other side.

If you have Fully Adjustable vertical tracks, hand tighten the left hand flag angle to the left hand vertical track using (2) 1/4" - 20 x 9/16" track bolts and (2) 1/4" - 20 flange hex nuts. Repeat for other side. Flange nuts will be secured after flag angle spacing is completed in step, Top Section.

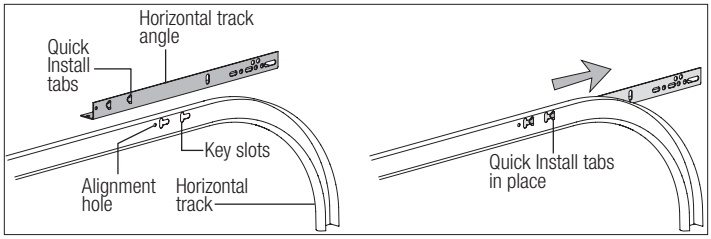


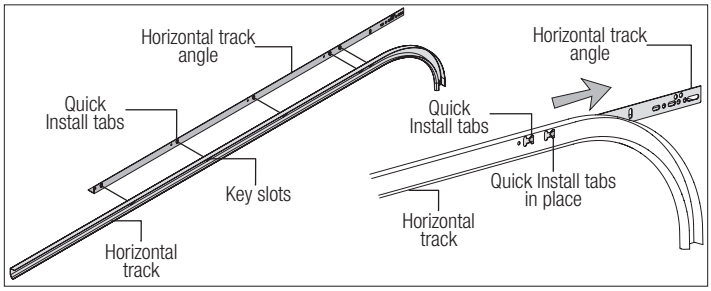
3 Horizontal Track Angles

Tools Required: Hammer

NOTE: For larger doors, a full length horizontal track angle may not already be spot welded to the horizontal track. If the horizontal track angle is not welded, the horizontal track angle will be installed, as shown.

Position the left hand horizontal track angle, as shown. Place the Quick Install tabs of the horizontal track angle in the key slot of the left hand horizontal track. Using a hammer, tap the horizontal track angle towards the curved end of the track until the alignment hole in the track and angle are aligned. Repeat for other side. Set tracks aside.



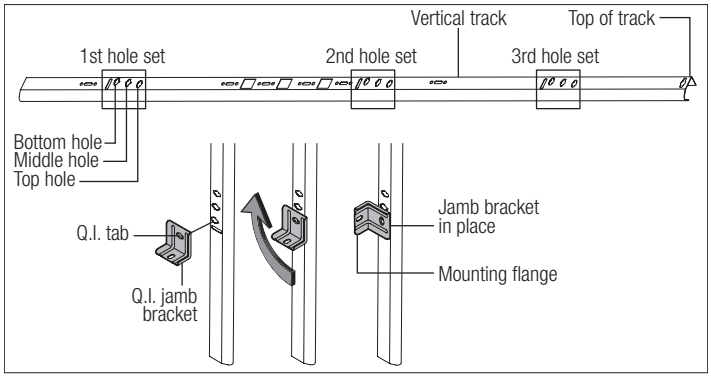


4 Quick Install Jamb Brackets

Tools Required: None

NOTE: If you have Fully Adjustable Flag Angles, Riveted Track or Angle Mount Track, skip this step.

Measure the length of the vertical tracks. Using the jamb bracket schedule, determine the placement of the jamb brackets for your door height and track length. To install the jamb brackets, align the Quick Install tab on the Quick Install jamb bracket with the Quick Install feature in the vertical track and turn the bracket perpendicular to the track so the mounting flange is toward the back (flat) leg of the track. Repeat for other side.



JAMB BRACKET SCHEDULE							
DOOR HEIGHT	TRACK LENGTH	1ST SET		2ND SET		3RD SET	
6'0"	64" (1626 mm)	9	M	11	M	NA	
6'3"	67" (1702 mm)	9	B	11	M	NA	
6'6"	70" (1778 mm)	9	M	10	B	NA	
6'9"	73" (1854 mm)	9	M	10	B	NA	
7'0"	76" (1930 mm)	9	M	10	B	NA	
7'6"	82" (2083 mm)	9	T	10	M	11	M
7'9"	85" (2159 mm)	9	T	10	M	11	M
8'0"	88" (2235mm)	9	T	10	M	11	M
B= BOTTOM HOLE, M= MIDDLE HOLE, T= TOP HOLE							

5 Fully Adjustable Jamb Brackets

Tools Required: None

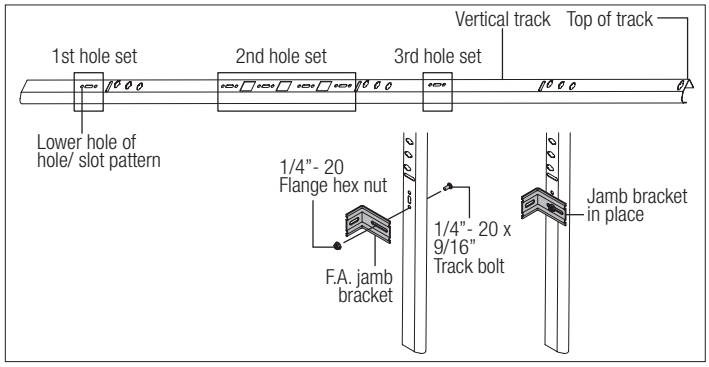
NOTE: If you have Quick Install jamb brackets, Riveted Track or Angle Mount Track, skip this step.

NOTE: The bottom jamb bracket is always the shortest bracket, while the center jamb bracket is the next tallest. If three jamb brackets per side are included with your door, you will have received a top jamb bracket, which is the tallest.

To attach the bottom jamb bracket, locate lower hole of the hole/ slot pattern of the 1st hole set on the vertical track. Align the slot in the jamb bracket with the lower hole of the hole/ slot pattern. Secure jamb bracket using (1) 1/4" - 20 x 9/16" track bolt and (1) 1/4" - 20 flange hex nut. Repeat for other side.

Place the center jamb bracket over the lower hole of the hole/ slot pattern that is centered between the bottom jamb bracket and flag angle of the 2nd hole set. Secure jamb bracket using (1) 1/4" - 20 x 9/16" track bolt and (1) 1/4" - 20 flange hex nut. Repeat for other side.

If a top jamb bracket was included, secure it to vertical track using the lower hole of the hole/ slot pattern in the 3rd hole set and (1) 1/4" - 20 x 9/16" track bolt and (1) 1/4" - 20 flange hex nut. Repeat for other side.



6 Bottom Corner Brackets

Tools Required: Power Drill, 7/16" Socket driver, Tape measure, Saw horses

NOTE: Refer to Package Contents / Parts Breakdown, to determine which bottom corner brackets you have.

Uncoil the counterbalance lift cables. Depending on which bottom corner brackets you have (reference illustrations below), slip the loop at the ends of the counterbalance lift cable over the milford pin of the bottom corner bracket or secure the cable loop to the clevis pin and bottom corner bracket using a flat washer and a cotter pin. Repeat for other bottom corner bracket.

⚠ WARNING

FAILURE TO ENSURE TIGHT FIT OF CABLE LOOP OVER MILFORD PIN COULD RESULT IN COUNTERBALANCE LIFT CABLE COMING OFF THE PIN, ALLOWING THE DOOR TO FALL, POSSIBLY RESULTING IN SEVERE OR FATAL INJURY.

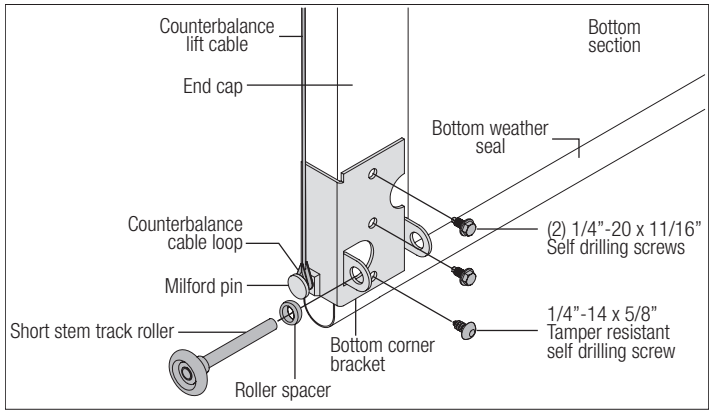
Starting on the left hand side, attach the left hand bottom corner bracket to the left corner of the bottom section, making sure it is seated to the edges of the end cap, using 1/4" - 20 x 11/16" self drilling screws, roller spacer (if applicable) washer (if applicable) and (1) 1/4" - 14 x 5/8" tamper resistant self drilling screw. Repeat for right hand bottom corner bracket.

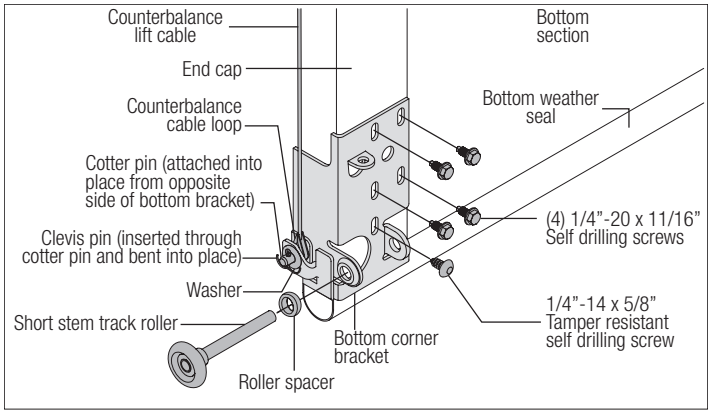
NOTE: All doors are provided with the tamper resistant fastener for the bottom corner brackets. However, the professional installer is most likely to have the proper tool to install this fastener. If the homeowner does not have the proper tool to install the tamper resistant fastener, use a regular 1/4" - 20 x 11/16" self drilling screw in its place.

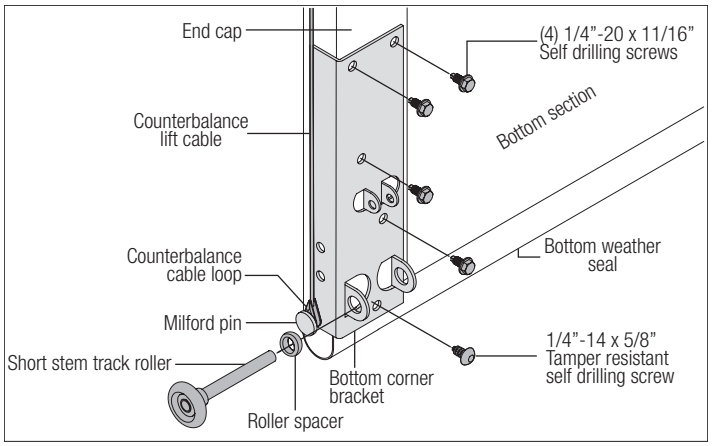
NOTE: Check to ensure cable loop fits tightly over the milford pins.

Insert a short stem track roller with roller spacer into the bottom corner bracket. Repeat for other side.

NOTE: Verify bottom weather seal (bottom seal) is aligned with door section. If there is more than 1/2" excess bottom weather seal on either side, trim bottom weather seal even with door section.




Counterbalance lift cable
Bottom section
End cap
Bottom weather seal
Counterbalance cable loop
Cotter pin (attached into place from opposite side of bottom bracket)
(4) 1/4"-20 x 11/16" Self drilling screws
Clevis pin (inserted through cotter pin and bent into place)
Washer
Short stem track roller
1/4"-14 x 5/8" Tamper resistant self drilling screw
Bottom corner bracket
Roller spacer



7 Graduated Hinge / Strut Attachment

Tools Required: Power drill, 7/16" Socket driver, Saw horses, Tape Measure

NOTE: Refer to door section identification, located in the pre-installation section of this manual to determine what size sections you need to use as your lock (second) section, intermediate (third) section, intermediate (fourth) section, intermediate (fifth) section, intermediate (sixth) section, intermediate (seventh) section, intermediate (eighth) section and top section. Measure your sections to make sure they are the correct height as indicated on the chart.

NOTE: The graduated end hinges can be identified by the number stamped on the lower hinge leaf. The #1 graduated end hinges serves as end hinges on the bottom section. The #1 graduated end hinges also serves as center hinges on all sections, except for the top section.

NOTE: The #2 graduated end hinges serves as end hinges on the Lock section.

NOTE: The #3 graduated end hinges serves as end hinges on the Intermediate I section.

NOTE: The #4 graduated end hinges serves as end hinges on the Intermediate II section.

NOTE: The #5 graduated end hinges serves as end hinges on the Intermediate III section.

NOTE: The #6 graduated end hinges serves as end hinges on the Intermediate IV section.

NOTE: The #7 graduated end hinges serves as end hinges on the Intermediate V section.

NOTE: The #8 graduated end hinges serves as end hinges on the Intermediate VI section.

NOTE: Refer to the strutting schedules below to determine the placement of strut(s) on your door. Be sure to use the proper schedules for the type of door model and the size of your door.

IMPORTANT: WHEN REFERRING TO THE STRUTTING SCHEDULES, DETERMINE HOW MANY STRUTS YOUR DOOR NEEDS AND ON WHAT SECTIONS THEY ARE NEEDED TO BE INSTALLED. ALSO BE SURE TO USE THE CORRECT STRUTTING SCHEDULE FOR ALUMINUM DOORS OR STEEL DOORS DEPENDING ON THE MATERIAL YOUR DOOR IS MADE OF. ALSO USE THE CORRECT STRUTTING SCHEDULE FOR THE PROPER COLOR OF YOUR DOOR.

NOTE: Sections not noted in the strutting schedule, do not require a strut. All strut(s) are placed at the top of the section(s).

Strutting Schedule Key:	
TS = Top Section	I1 = Intermediate Section #1
IW = Intermediate Section With Windows	LS = Lock Section
I6 = Intermediate Section #6	BS = Bottom Section
I5 = Intermediate Section #5	ES = Every Section gets a strut.
I4 = Intermediate Section #4	RS = Remaining Sections gets a strut.
I3 = Intermediate Section #3	2S = 2" Strut
I2 = Intermediate Section #2	3S = 3" Strut

Using sawhorses, lay sections together on a flat smooth surface. Ensure the appropriate

graduated end hinges, center hinge(s) and strut (if applicable) are on top of their corresponding sections.

INSTALLATION ON TOP SECTION: Place the strut on the top edge of the top section, as shown. Center the strut side to side on the section, as shown. Secure the graduated end and center hinges to the section using (2) 1/4" - 20 x 7/8" self drilling screws at each graduated end / center hinge locations.

INSTALLATION ON ALL SECTIONS (EXCEPT TOP SECTION): Starting on the left hand side of the bottom section, align the lower leafs of the #1 graduated end hinge over the holes at the top of the end caps located at the top of bottom section. Next, align the lower hinge leafs of the #1 center hinges with the dimples at the center location(s) located at the top of the section. If applicable, place the strut on top of the graduated end and center hinges.

For Graduated End And Center Hinge Installation Only: Secure the graduated end and center hinges to the section using (2) 1/4" - 20 x 11/16" self drilling screws at each graduated end / center hinge locations.

For Strut, Graduated End And Center Hinge Installation Only: Secure the strut to the graduated end and center hinges to the section using (2) strut clips (if applicable) and (2) 1/4" - 20 x 7/8" self drilling screws at each graduated end / center hinge locations.

NOTE: If your Intermediate Section has windows in it and a strut needs to be installed on that section, strut clips will need to be used to attach it to the section.

IMPORTANT: ONCE THE 1/4" - 20 X 7/8" / 1/4" - 20 X 11/16" SELF DRILLING SCREWS ARE SNUG AGAINST THE LOWER HINGE LEAFS, TIGHTEN AN ADDITIONAL 1/4 TO 1/2 TURN TO RECEIVE MAXIMUM DESIGN HOLDING POWER.

Insert a short stem track roller into the hinge tube of the #1 graduated end hinges. Repeat graduated hinge / strut attachment using the appropriate graduated end hinges and strut (if applicable) for all remaining sections, except the top section.

NOTE: The top section only receives a strut (if applicable) and does not require graduated end hinges and center hinges to be installed onto the section.

IMPORTANT: WHEN PLACING SHORT STEM TRACK ROLLERS INTO THE #2 GRADUATED END HINGES AND HIGHER, THE SHORT STEM TRACK ROLLER GOES INTO HINGE TUBE FURTHEST AWAY FROM SECTION.

Strutting Schedule For Model 8300 Steel (White, Almond, and Taupe Colored Doors)

Door Heights	Section Quantity	Door Configurations	Door Widths			
			10'0" - 14'0"	15'0" - 16'0"	17'0" - 18'0"	20'0"
< = 8'0"	4	Solid / Top (Windows)	2S, TS	2S, TS / 2S, LS	2S, TS / 2S, LS / 2S, BS	3S, ES
	5	Solid / Top (Windows)		2S, TS / 2S, I1	2S, TS / 2S, I1 / 2S, BS	
	4 or 5	Intermediate (Windows)	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, BS		
> 8'0"	5	Solid	2S, TS	2S, TS / 2S, I1 / 2S, BS	2S, ES	N/A
		Top (Windows)			3S, TS / 2S, RS	
		Intermediate (Windows)	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, BS	2S, ES	
	6	Solid	2S, TS	2S, TS / 2S, I2 / 2S, BS	2S, ES	N/A
		Top (Windows)			3S, TS / 2S, RS	
		Intermediate (Windows)	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, BS	2S, ES	
12'0" - 14'0"	7-9	Solid	2S, TS	3S, TS / 2S, I3 / 2S, I1 / 2S, BS	3S, TS / 2S, I4 / 2S, I3 / 2S, I2 / 2S, I1 / 2S, BS	N/A
		Top (Windows)				
		Intermediate (Windows)	2S, TS / 2S, IW	3S, TS / 2S, IW / 2S, I1 / 2S, BS		

Strutting Schedule For Model 8300 Steel (Brown Colored Doors)

Door Heights	Section Quantity	Door Configurations	Door Widths			
			10'0"	12'0" - 16'0"	17'0" - 18'0"	20'0"
< = 8'0"	4	Solid / Top (Windows)	2S, TS	2S, TS / 2S, LS / 2S, BS	3S, TS / 3S, LS / 3S, BS	3S, ES
		Intermediate (Windows)	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, BS	3S, TS / 3S, IW / 3S, BS	
	5	Solid / Top (Windows)	2S, TS	3S, TS / 3S, I1 / 3S, BS		3S, ES
		Intermediate (Windows)	2S, TS / 2S, IW	3S, TS / 3S, IW / 3S, BS		

Strutting Schedule For Model 8300 Steel (Brown Colored Doors)

Door Heights	Section Quantity	Door Configurations	Door Widths			
			10'0"	12'0" - 16'0"	17'0" - 18'0"	20'0"
> 8'0"	5	Solid / Top (Windows)	2S, TS	2S, TS / 2S, LS / 2S, BS	3S, TS / 3S, LS / 3S, BS	3S, ES
		Intermediate (Windows)	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, BS	3S, TS / 3S, IW / 3S, BS	
	6	Solid / Top (Windows)	2S, TS	3S, TS / 3S, I2 / 3S, BS		3S, ES
		Intermediate (Windows)	2S, TS / 2S, IW	3S, TS / 3S, IW / 3S, BS		
12'0" - 14'0"	7 - 9	Solid / Top (Windows)	2S, TS / 2S, I1	3S, TS / 2S, I3 / 2S, I1 / 2S, LS / 2S, BS	3S, ES	N/A
		Intermediate (Windows)	2S, TS / 2S, IW	3S, TS / 2S, IW / 2S, I1 / 2S, LS / 2S, BS		

Strutting Schedule For Model 8300 Aluminum (White, Almond & Taupe Colored Doors)

Door Heights	Section Quantity	Door Configurations	Door Widths				
			6'0" - 9'0"	10'0" - 14'0"	15'0" - 16'0"	17'0" - 18'0"	20'0"
< = 8'0"	4	Solid / Top (Windows)	2S, TS	2S, TS	2S, TS / 2S, LS / 2S, BS	3S, TS / 3S, LS / 3S, BS	3S, ES
		Intermediate (Windows)		2S, TS / 2S, IS	2S, TS / 2S, IW / 2S, BS	3S, TS / 3S, IW / 3S, BS	
	5	Solid	2S, TS	2S, TS	2S, TS / 2S, I1 / 2S, BS	2S, TS / 2S, I1 / 2S, BS	3S, TS / 3S, I2 / 3S, I1 / 3S, BS
		Top (Windows)				3S, TS / 2S, I1 / 2S, BS	
		Intermediate (Windows)		2S, TS / 2S, IS	2S, TS / 2S, IW / 2S, BS		3S, TS / 3S, IW / 3S, I1 / 3S, BS
> 8'0"	5	Solid	2S, TS	2S, TS	2S, TS / 2S, I2 / 2S, I1 / 2S, BS	2S, ES	N/A
		Top (Windows)				3S, TS / 2S, RS	
		Intermediate (Windows)		2S, TS / 2S, IS	2S, TS / 2S, IW / 2S, I1 / 2S, BS	2S, ES	
	6	Solid	2S, TS	2S, TS	2S, TS / 2S, I2 / 2S, I1 / 2S, BS	2S, ES	N/A
		Top (Windows)				3S, TS / 2S, RS	
		Intermediate (Windows)		2S, TS / 2S, IS	2S, TS / 2S, IW / 2S, I1 / 2S, BS	2S, ES	

Strutting Schedule For Model 8300 Aluminum (Brown Colored Doors)

Door Heights	Section Quantity	Door Configurations	Door Widths			
			6'0" - 10'0"	12'0" - 16'0"	17'0" - 18'0"	20'0"
< = 8'0"	4	Solid / Top (Windows)	2S, TS	2S, TS / 2S, LS / 2S, BS		3S, ES
		Intermediate (Windows)		2S, TS / 2S, IW / 2S, BS		
	5	Solid	2S, TS	2S, TS / 2S, I1 / 2S, BS	2S, TS / 2S, I1 / 2S, BS	3S, ES
		Top (Windows)			3S, TS / 3S, I1 / 3S, BS	
		Intermediate (Windows)		2S, TS / 2S, IW / 2S, BS	3S, TS / 3S, IW / 3S, BS	

Strutting Schedule For Model 8300 Aluminum (Brown Colored Doors)

Door Heights	Section Quantity	Door Configurations	Door Widths			
			6'0" - 10'0"	12'0" - 16'0"	17'0" - 18'0"	20'0"
> 8'0"	5	Solid / Top (Windows)	2S, TS	3S, TS / 3S, I2 / 3S, I1 / 3S, BS	3S, ES	N/A
		Intermediate (Windows)		3S, TS / 3S, IW / 3S, I1 / 3S, BS		
	6	Solid / Top (Windows)	2S, TS	3S, TS / 3S, I2 / 3S, I1 / 3S, BS	3S, ES	N/A
		Intermediate (Windows)		3S, TS / 3S, IW / 3S, I1 / 3S, BS		

Strutting Schedule For Model 8500 Steel (White, Almond & Taupe Colored Doors)

Door Heights	Section Quantity	Door Configurations	Door Width				
			10'0"	12'0" - 14'0"	15'0" - 16'0"	17'0" - 18'0"	20'0"
< = 8'0"	4	Solid	N/A	2S, TS	2S, TS	2S, TS / 2S, LS / 2S, BS	3S, ES
		Top (Windows)	2S, TS			3S, TS / 2S, LS / 2S, BS	
		Intermediate (Windows)	N/A	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, BS		
	5	Solid	N/A	2S, TS	2S, TS	2S, TS / 2S, I1 / 2S, BS	3S, ES
		Top (Windows)	2S, TS			3S, TS / 2S, IW / 2S, BS	
		Intermediate (Windows)	N/A	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, BS		
> 8'0"	5	Solid	N/A	2S, TS	2S, TS / 2S, I1	2S, TS / 2S, I2 / 2S, I1 / 2S, BS	N/A
		Top (Windows)	2S, TS			3S, TS / 2S, I2 / 2S, I1 / 2S, BS	
		Intermediate (Windows)	N/A	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, BS	2S, TS / 2S, IW / 2S, I1 / 2S, BS	
	6	Solid	N/A	2S, TS	2S, TS / 2S, I2	2S, TS / 2S, I2 / 2S, I1 / 2S, BS	N/A
		Top (Windows)	2S, TS			3S, TS / 2S, I2 / 2S, I1 / 2S, BS	
		Intermediate (Windows)	N/A	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, BS	2S, TS / 2S, IW / 2S, I1 / 2S, BS	
12'0" - 14'0"	7 - 9	Solid	N/A	2S, TS	2S, TS / 2S, I3 / 2S, I1 / 2S, BS	3S, TS / 2S, I4 / 2S, I3 / 2S, I1 / 2S, BS	N/A
		Top (Windows)	2S, TS		2S, TS / 2S, IW / 2S, I1 / 2S, BS	3S, TS / 2S, IW / 2S, I3 / 2S, I1 / 2S, BS	
		Intermediate (Windows)	N/A	2S, TS / 2S, IW			

Strutting Schedule For Model 8500 Steel (Brown Colored Doors)

Door Heights	Section Quantity	Door Configurations	Door Widths			
			10'0"	12'0" - 16'0"	17'0" - 18'0"	20'0"
< = 8'0"	4	Solid / Top (Windows)	2S, TS	2S, TS / 2S, LS / 2S, BS	3S, TS / 3S, LS / 3S, BS	3S, ES
		Intermediate (Windows)		2S, TS / 2S, IW / 2S, BS	3S, TS / 3S, IW / 3S, BS	
	5	Solid	2S, TS	2S, TS / 2S, LS / 2S, BS	3S, TS / 3S, LS / 3S, BS	3S, ES
		Top (Windows)				
		Intermediate (Windows)		2S, TS / 2S, IW / 2S, BS	3S, TS / 3S, IW / 3S, BS	
> 8'0"	5	Solid / Top (Windows)	2S, TS	2S, TS / 2S, I2 / 2S, I1 / 2S, BS	3S, TS / 3S, I2 / 3S, I1 / 3S, BS	N/A
		Intermediate (Windows)		2S, TS / 2S, IW / 2S, I1 / 2S, BS	3S, TS / 3S, IW / 3S, I1 / 3S, BS	
	6	Solid / Top (Windows)	2S, TS	2S, TS / 2S, I2 / 2S, I1 / 2S, BS	3S, TS / 3S, I2 / 3S, I1 / 3S, BS	N/A
		Intermediate (Windows)	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, I1 / 2S, BS	3S, TS / 3S, IW / 3S, I1 / 3S, BS	
12'0" - 14'0"	7 - 9	Solid / Top (Windows)	2S, TS	2S, TS / 2S, I4 / 2S, I2 / 2S, I1 / 2S, BS	3S, TS / 3S, I4 / 3S, I2 / 3S, I1 / 3S, BS	N/A
		Intermediate (Windows)	2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, I2 / 2S, I1 / 2S, BS	3S, TS / 3S, IW / 3S, I2 / 3S, I1 / 3S, BS	

Strutting Schedule For Model 8500 Aluminum (White, Almond & Taupe Colored Doors)

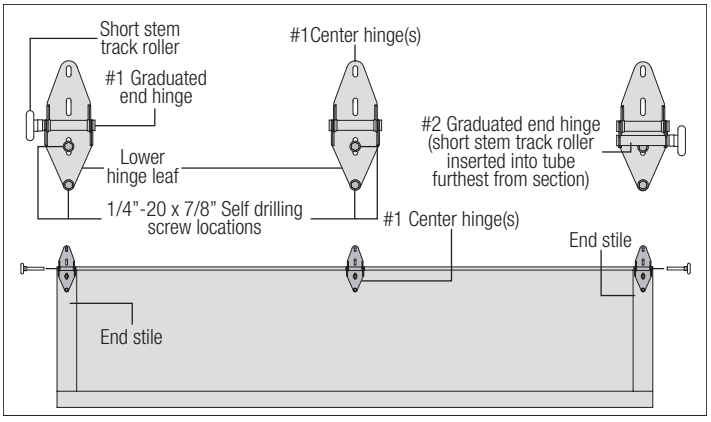
Door Heights	Section Quantity	Door Configurations	Door Widths					
			6'0" - 9'0"	10'0"	12'0" - 14'0"	15'0" - 16'0"	17'0" - 18'0"	20'0"
< = 8'0"	4	Solid	2S, TS	2S, TS	2S, TS / 2S, LS	2S, TS / 2S, LS / 2S, BS	2S, TS / 2S, LS / 2S, BS	3S, ES
		Top (Windows)					3S, TS / 2S, LS / 2S, BS	
		Intermediate (Windows)			2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, BS		
	5	Solid	2S, TS		2S, TS / 2S, I1	2S, TS / 2S, I1 / 2S, BS		3S, TS / 3S, I2 / 3S, I1 / 3S, BS
		Top (Windows)				2S, TS / 2S, I1 / 2S, BS	3S, TS / 2S, LS / 2S, BS	
		Intermediate (Windows)			2S, TS / 2S, IW	2S, TS / 2S, I1 / 2S, BS		3S, TS / 3S, IW / 3S, I1 / 3S, BS

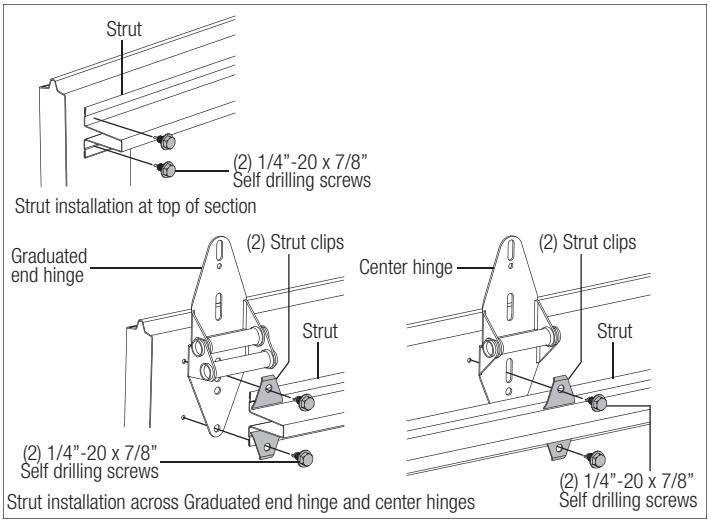
Strutting Schedule For Model 8500 Aluminum (White, Almond & Taupe Colored Doors)

Door Heights	Section Quantity	Door Configurations	Door Widths					
			6'0" - 9'0"	10'0"	12'0" - 14'0"	15'0" - 16'0"	17'0" - 18'0"	20'0"
> 8'0"	5	Solid	2S, TS		2S, TS / 2S, I1	2S, TS / 2S, I2 / 2S, I1 / 2S, BS		N/A
		Top (Windows)	2S, TS	2S, TS / 2S, I1		2S, TS / 2S, I2 / 2S, I1 / 2S, BS	3S, TS / 2S, I2 / 2S, I1 / 2S, BS	
		Intermediate (Windows)	2S, TS		2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, I1 / 2S, BS		
	6	Solid	2S, TS		2S, TS / 2S, I2	2S, TS / 2S, I2 / 2S, I1 / 2S, BS	2S, TS / 2S, I3 / 2S, I2 / 2S, I1 / 2S, BS	N/A
		Top (Windows)	2S, TS	2S, TS / 2S, I2			3S, TS / 2S, I3 / 2S, I2 / 2S, I1 / 2S, BS	
		Intermediate (Windows)	2S, TS		2S, TS / 2S, IW	2S, TS / 2S, IW / 2S, I1 / 2S, BS	2S, TS / 2S, IW / 2S, I2 / 2S, I1 / 2S, BS	

Strutting Schedule For Model 8500 Aluminum (Brown Colored Doors)

Door Heights	Section Quantity	Door Configurations	Door Widths			
			6'0" - 10'0"	12'0" - 16'0"	17'0" - 18'0"	20'0"
< = 8'0"	4	Solid / Top (Windows)	2S, TS	2S, TS / 2S, LS / 2S, BS	3S, TS / 3S, LS / 3S, BS	3S, ES
		Intermediate (Windows)		2S, TS / 2S, IW / 2S, BS	3S, TS / 3S, IW / 3S, BS	
	5	Solid / Top (Windows)	2S, TS	2S, TS / 2S, I1 / 2S, BS	3S, TS / 3S, I1 / 3S, BS	3S, ES
		Intermediate (Windows)		2S, TS / 2S, IW / 2S, BS	3S, TS / 3S, IW / 3S, BS	
> 8'0"	5	Solid / Top (Windows)	2S, TS	2S, TS / 2S, I2 / 2S, I1 / 2S, BS	3S, TS / 3S, I2 / 3S, I1 / 3S, BS	N/A
		Intermediate (Windows)		2S, TS / 2S, IW / 2S, I1 / 2S, BS	3S, TS / 3S, IW / 3S, I1 / 3S, BS	
	6	Solid / Top (Windows)	2S, TS	2S, TS / 2S, I2 / 2S, I1 / 2S, BS	3S, TS / 3S, I3 / 3S, I2 / 3S, I1 / 3S, BS	N/A
		Intermediate (Windows)		2S, TS / 2S, IW / 2S, I1 / 2S, BS	3S, TS / 3S, IW / 3S, I2 / 3S, I1 / 3S, BS	


Short stem track roller
#1 Graduated end hinge
Lower hinge leaf
1/4"-20 x 7/8" Self drilling screw locations
#1Center hinge(s)
#2 Graduated end hinge (short stem track roller inserted into tube furthest from section)
#1 Center hinge(s)
End stile
End stile

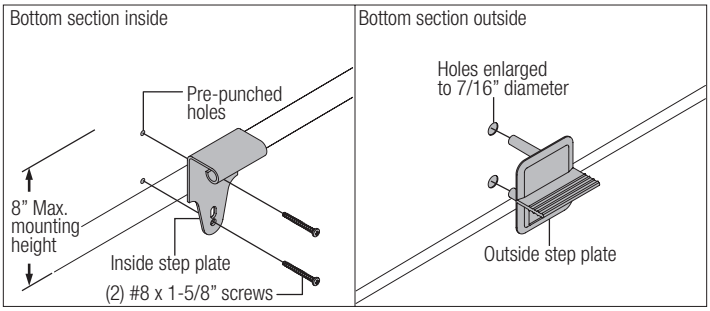

Strut
(2) 1/4"-20 x 7/8" Self drilling screws
Strut installation at top of section
Graduated end hinge
(2) Strut clips
Strut
(2) 1/4"-20 x 7/8" Self drilling screws
Center hinge
(2) Strut clips
Strut
(2) 1/4"-20 x 7/8" Self drilling screws
Strut installation across Graduated end hinge and center hinges

8 Step Plate

Tools Required: Tape measure, Power drill, Drill bits, 7/16" Wrench, Phillips head screwdriver, Saw horses

Locate the center most center stile on the bottom section of the door. On the inside of the door and using the pre-punched holes at the bottom of the center stile as a template, drill (2) 7/32" dia. holes through the section. Using the previously drilled holes as a guide, enlarge the holes from outside the door to 7/16" dia. and assemble the outside and inside step plates to the section using (2) #8 x 1-5/8" screws.

CAUTION: DO NOT DRILL THROUGH OR ENLARGE HOLES ON THE INSIDE OF THE DOOR SECTION.



9 Lift Handle

Tools Required: Tape measure, Pencil, Power drill, 9/32"/1/2" Drill bits, 1/4" Wrench, Saw horses

NOTE: Doors with a Keyed lock do not require this lift handle.

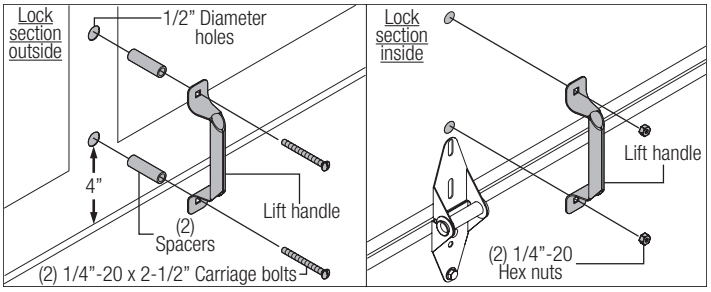
Locate the inside center stile or the desired lift handle location on the lock (2nd) section of the door. Position the lower hole in the lift handle 4" from the bottom of the lock (2nd) section.

IMPORTANT: THE DISTANCE BETWEEN THE STEP PLATE AND THE MIDDLE OF THE LIFT HANDLE MUST BE 20" MINIMUM TO 30" MAXIMUM. IF NECESSARY REPOSITION THE UPPER LIFT HANDLE TO STAY WITHIN THE REQUIRED DIMENSION.

Using the lift handle holes as a template, drill (2) 9/32" dia. holes through the lock section. Enlarge the holes from the outside the door to 1/2" dia.

CAUTION: DO NOT DRILL THROUGH OR ENLARGE HOLES ON THE INSIDE OF THE DOOR SECTION.

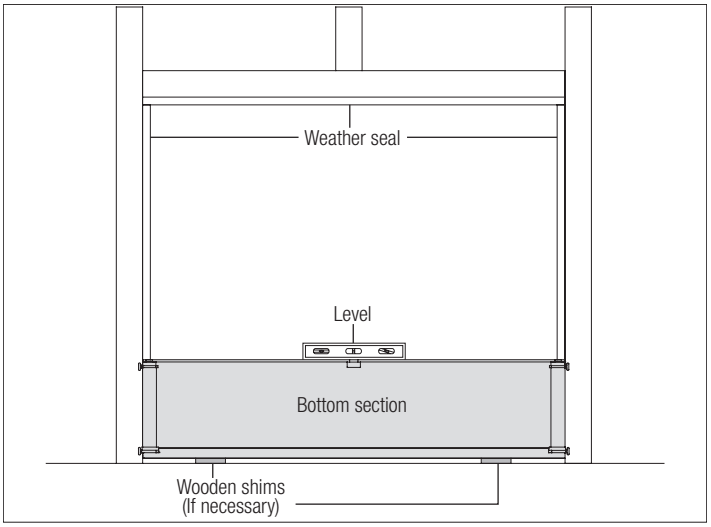
Assemble the outside and inside lift handles to the lock section using (2) spacers, (2) 1/4" - 20 x 2-1/2" carriage bolts and (2) 1/4" - 20 hex nuts.



10 Bottom Section

Tools Required: Level, Wooden shims (if necessary)

Center the bottom section in the door opening. Level the section using wooden shims (if necessary) under the bottom section. When the bottom section is leveled, temporarily hold it in place by driving a nail into the jamb and bending it over the edge of the bottom section on both sides.



11 Vertical Tracks

Tools Required: Power Drill, 3/16" Drill bit, 7/16" Socket driver, Tape measure, Level, Step ladder

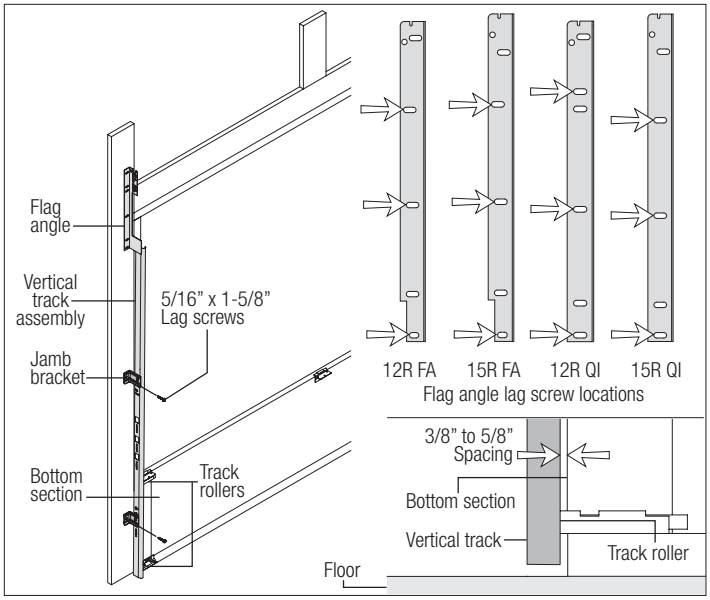
NOTE: Depending on your door, you may have Quick Install Flag Angles, Fully Adjustable Flag Angles, Riveted Vertical Track Assemblies or you may have Angle Mount Vertical Track Assemblies. Refer to Package Contents / Parts Breakdown, to determine which Flag Angles / Vertical Track Assemblies you have.

IMPORTANT: IF YOUR DOOR IS TO BE INSTALLED PRIOR TO A FINISHING CONSTRUCTION OF THE BUILDING'S FLOOR, THE VERTICAL TRACKS AND THE DOOR BOTTOM SECTION ASSEMBLY SHOULD BE INSTALLED SUCH THAT WHEN THE FLOOR IS CONSTRUCTED, NO DOOR OR TRACK PARTS ARE TRAPPED IN THE FLOOR CONSTRUCTION.

IMPORTANT: THE TOPS OF THE VERTICAL TRACK ASSEMBLIES MUST BE LEVEL FROM SIDE TO SIDE. IF THE BOTTOM SECTION WAS SHIMMED TO LEVEL IT, THE VERTICAL TRACK ASSEMBLY ON THE SHIMMED SIDE MUST BE RAISED THE HEIGHT OF THE SHIM.

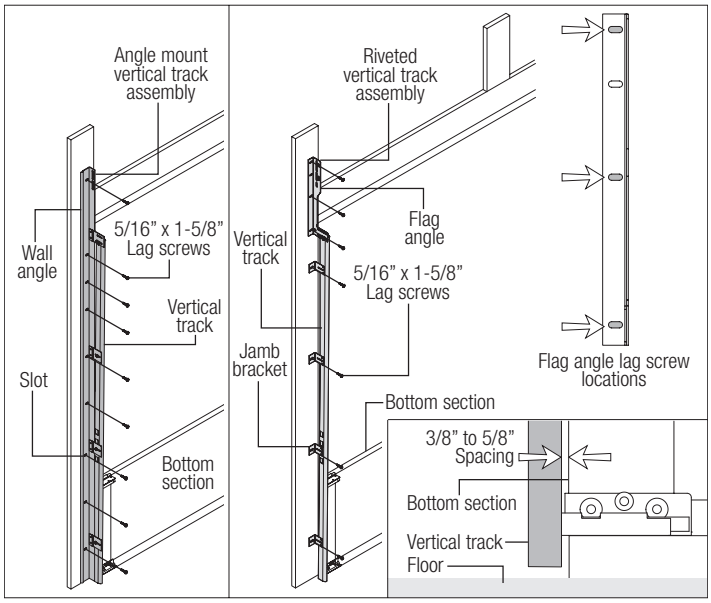
Position the left hand vertical track assembly over the track rollers of the bottom section. Make sure the counterbalance lift cable is located between the track rollers and the door jamb. Drill 3/16" pilot holes into the door jamb for the lag screws.

FOR QUICK INSTALL FLAG ANGLES OR FULLY ADJUSTABLE FLAG ANGLES: Loosely fasten jamb brackets and flag angle to the jamb using 5/16" x 1-5/8" lag screws. Tighten lag screws, securing the bottom jamb bracket to jamb, maintain 3/8" to 5/8" spacing, between the bottom section and vertical track. Hang counterbalance lift cable over flag angle. Repeat same process for other side.



FOR RIVETED VERTICAL TRACK ASSEMBLY: Loosely fasten jamb brackets and flag angle to the jamb using 5/16" x 1-5/8" lag screws. Tighten lag screws, securing the bottom jamb bracket to jamb, maintain 3/8" to 5/8" spacing as shown between the bottom section and vertical track. Hang counterbalance lift cable over flag angle. Repeat same process for other side.

FOR ANGLE MOUNT VERTICAL TRACK ASSEMBLY: Loosely fasten the slots in the wall angle to the jamb using 5/16" x 1-5/8" lag screws. Tighten lag screws, securing the bottom slot in the wall angle, maintain 3/8" to 5/8" spacing as shown between the bottom section and vertical track. Hang counterbalance lift cable over angle mount. Repeat same process for other side.



12 Stacking Sections

Tools Required: Power drill, 7/16" Socket driver

NOTE: Refer to door section identification, located in the pre-installation section of this manual to determine what size sections you need to use as your lock (second) section, intermediate (third) section, intermediate (fourth) section, intermediate (fifth) section, intermediate (sixth) section and intermediate (seventh) section. Measure your sections to make sure they are the correct height as indicated on the chart.

NOTE: Make sure graduated end and center hinges are flipped down, when stacking another section on top.

Place short stem track rollers into graduated end hinges of remaining sections.

NOTE: Larger doors will use long stem track rollers with double graduated end hinges.

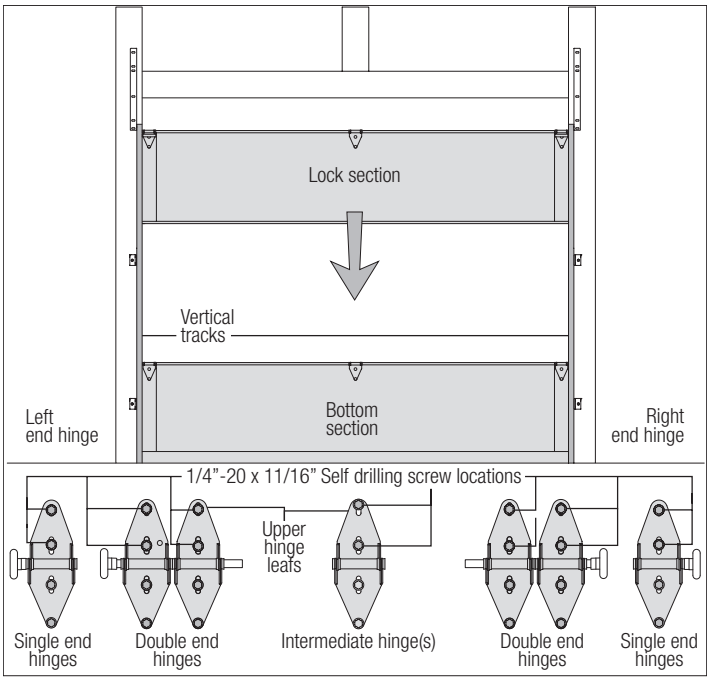
With assistance, lift second section and guide the track rollers into the vertical tracks. Lower section until it is seated against bottom section. Flip hinges up. Fasten center hinge(s) first; then end hinges last using 1/4" - 20 x 11/16" self-tapping screws.

Repeat same process for other sections, except top section.

IMPORTANT: PUSH & HOLD THE HINGE LEAFS SECURELY AGAINST THE SECTIONS WHILE

SECURING WITH 1/4" - 20 X 5/8" SELF-TAPPING SCREWS. THERE SHOULD BE NO GAP BETWEEN THE HINGE LEAFS AND THE SECTIONS.

NOTE: Install lock at this time (sold separately). See optional installation step, Side Lock.



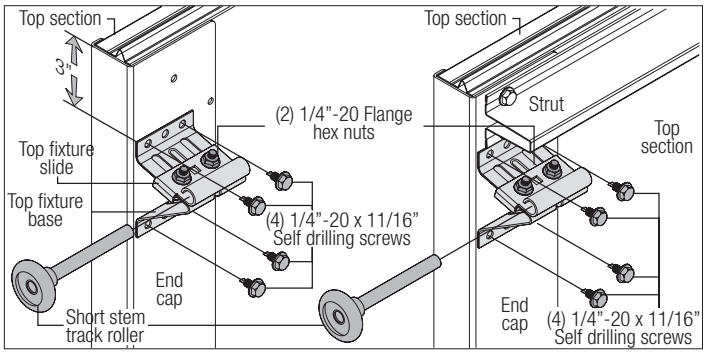
13 Top Fixtures

Tools Required: Power drill, 7/16" Socket driver, Saw horses

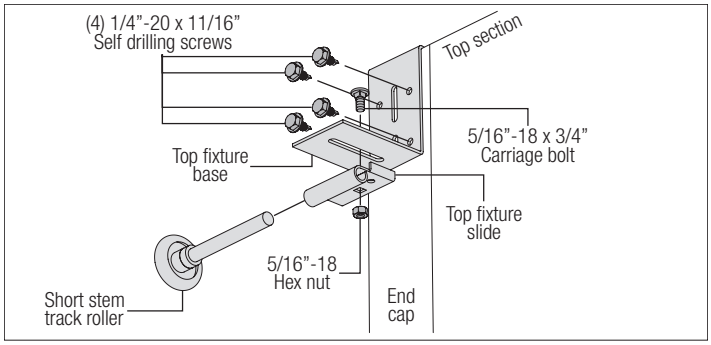
NOTE: Depending on your door, you may have Top Fixture Bases and Top Fixture Slides or you may have Top Fixture Assemblies. Refer to Illustrations / Package Contents / Parts Breakdown, to determine which Top Fixtures you have.

Starting on the left hand side, align the top fixture base 3" down from the top section or below strut and even with the edge of the top section. The slotted half of the top fixture base should be facing upwards. Fasten to section through end cap using (4) 1/4" - 20 x 11/16" self drilling screws. Insert short stem track roller into top fixture slide. Repeat for other side.

NOTE: If needed, ensure the top fixture slides are able to slide back and forth along the top fixture bases. If needed, loosen the (2) 1/4" - 20 flange hex nuts. The top fixture slide will be tightened and adjusted later, in step, Adjusting Top Fixtures.



Starting on the left hand side, align the top fixture base on top of the corner of the top section and even with the edge of the section. Fasten to section through end cap using (4) 1/4" - 20 x 11/16" self drilling screws. Loosely secure the top fixture slide to the top fixture base using (1) 5/16" - 18 x 3/4" carriage bolt and (1) 5/16" - 18 hex nut. The top fixture assembly will be tightened and adjusted later, in step, Adjusting Top Fixtures. Insert short stem track roller into top fixture slide. Repeat for other side.



14 Top Section

Tools Required: Hammer, Step ladder, Tape measure

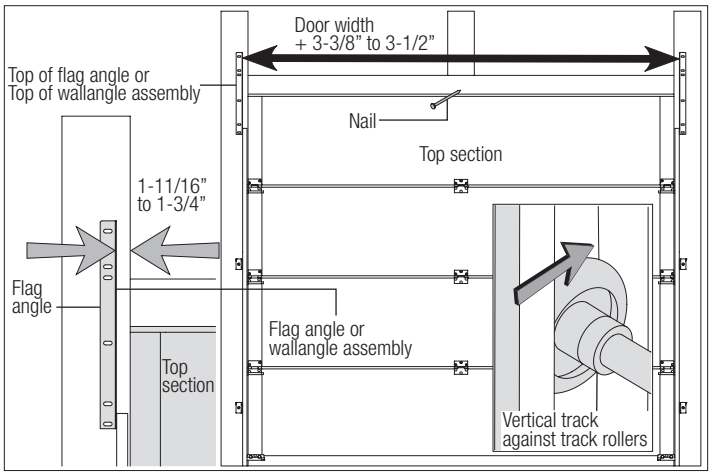
Place the top section in the opening. Temporarily secure the top section by driving a nail in the header near the center of the door and bending it over the top section. Now, flip up the hinge leaves, hold tight against section, and fasten center hinges first and end hinges last (refer to step, Stacking Sections). Vertical track alignment is critical. Position flag angle or wall angle between 1-11/16" (43 mm) to 1-3/4" (44 mm) from the edge of the door; tighten the bottom lag screw. Flag angles or wall angles must be parallel to the door sections. Repeat for other side.

IMPORTANT: THE DIMENSION BETWEEN THE FLAG ANGLES OR WALL ANGLES MUST BE DOOR WIDTH PLUS 3-3/8" (86MM) TO 3-1/2" (89 MM) FOR SMOOTH, SAFE DOOR OPERATION.

FOR QUICK INSTALL TRACK: Complete the vertical track installation by securing the jamb bracket(s) and tightening the other lag screws. Repeat for other side.

FOR FULLY ADJUSTABLE TRACK OR RIVETED TRACK: Complete the vertical track installation by securing the jamb bracket(s) and tightening the other lag screws. Push the vertical track against the track rollers so that the track rollers are touching the deepest part of the curved side of the track; tighten all the track bolts and nuts. Repeat for other side.

FOR ANGLE MOUNT TRACK: Complete the vertical track installation by securing the jamb bracket(s) and or tightening the other lag screws. Push the vertical track against the track rollers so that the track rollers are touching the deepest part of the curved side of the vertical track, as shown. Repeat for other side.



15 Drawbar Operator Bracket

Tools Required: Power drill, 7/16" Socket driver, Level, Tape measure, Step ladder

IMPORTANT: WHEN CONNECTING A TROLLEY TYPE GARAGE DOOR OPENER TO THIS DOOR, A WAYNE-DALTON OPERATOR/ TROLLEY BRACKET MUST BE SECURELY ATTACHED TO THE TOP SECTION OF THE DOOR IF ONE HAS BEEN PROVIDED, ALONG WITH ANY STRUTS PROVIDED WITH THE DOOR (IF A WAYNE-DALTON OPERATOR/ TROLLEY BRACKET WAS NOT PROVIDED WITH YOUR DOOR, THAN USE THE ONE PROVIDED BY YOUR OPERATOR MANUFACTURER). THE INSTALLATION OF THE OPERATOR MUST BE ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND FORCE SETTINGS MUST BE ADJUSTED PROPERLY.

NOTE: For retro fit applications, the drawbar operator bracket must be aligned with an existing operator.

NOTE: Refer to illustrations to determine which top fixtures were supplied with your door. Follow the corresponding step below:

Place the bottom half inside the top half and flush against the inside surface of the top section. Adjust both the top and bottom halves out as far apart as possible on the section surface. Secure the drawbar operator bracket bottom half and the top half together using (4) 5/16" - 18 x 1/2" carriage bolts and (4) 5/16" - 18 flange hex nuts.

NOTE: Install the 5/16" - 18 x 1/2" carriage bolts and the 5/16" - 18 flange hex nuts as far apart as possible, prior to securing both top and bottom halves together.

Now, locate the center of the top section and align the center of the holes in the drawbar operator bracket assembly with the top section center line. Align the drawbar operator bracket assembly vertically.

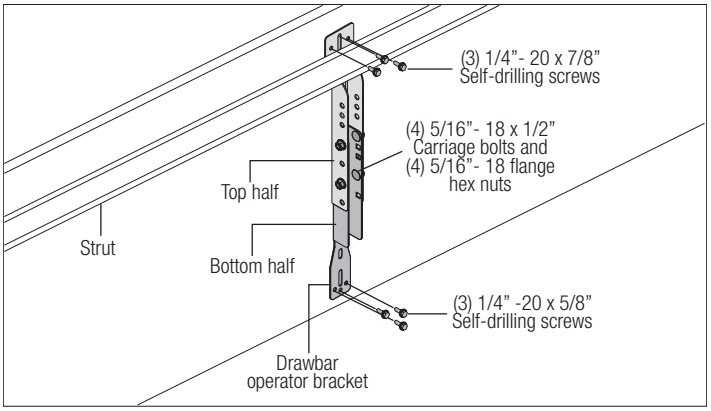
NOTE: For retro fit applications, the drawbar operator bracket assembly must be aligned with an existing operator.

Slide the top halve of the drawbar operator bracket assembly under the strut, keeping the drawbar operator bracket assembly aligned with the center line. Remove the strut's screws, if necessary and attach to the top section (through strut if necessary) using (3) 1/4" - 20 x 7/8" self drilling screws.

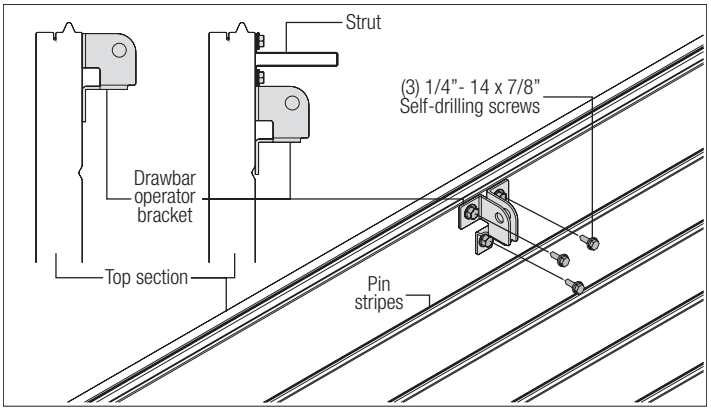
NOTE: If your door lacks a strut on the top section, ignore the previous paragraph.

Attach the bottom halve of the drawbar operator bracket to the section surface using (3) 1/4" - 20 x 5/8" self drilling screws.

NOTE: When attaching drawbar operator bracket to top section with strut, apply additional pressure to thread into the strut.



Locate the center of the top section. Position the drawbar operator bracket under the strut (if applicable) or align the drawbar operator bracket top edge with the top edge of the top section, as shown. Attach the drawbar operator bracket using (3) 1/4" - 20 x 7/8" self-drilling screws (as shown).



16 Horizontal Tracks

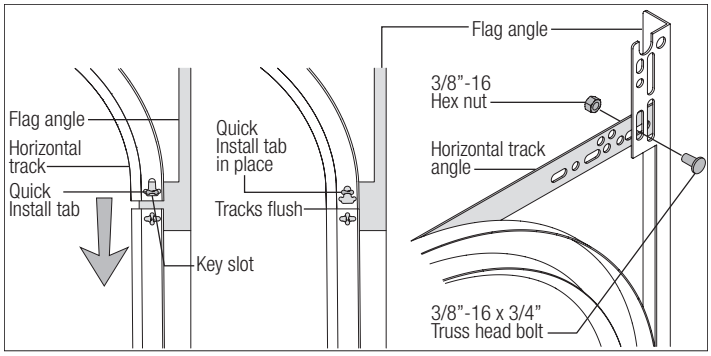
Tools Required: Ratchet wrench, 9/16" Socket, 9/16" Wrench, level, Step ladder

NOTE: Depending on your door, you may have Quick Install Flag Angles, Fully Adjustable Flag Angles, Riveted Vertical Track Assemblies or you may have Angle Mount Vertical Track Assemblies. Refer to Package Contents / Parts Breakdown, to determine which Flag Angles / Vertical Track Assemblies you have.

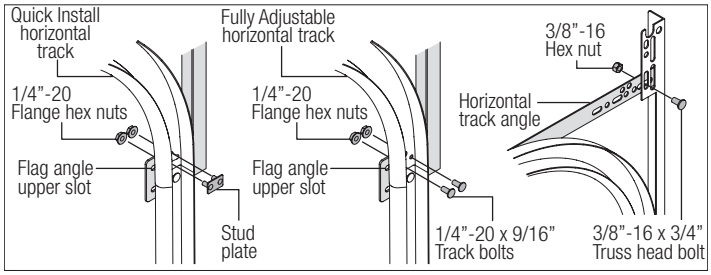
⚠ WARNING

DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR, AS OUTLINED IN STEP, REAR BACK HANGS, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE OR FATAL INJURY.

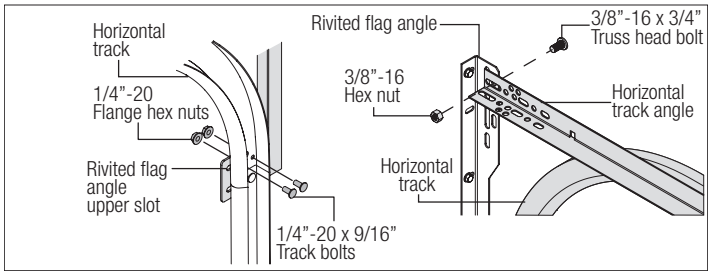
IF YOU HAVE QUICK INSTALL FLAG ANGLES: To install horizontal track, place the curved end over the top track roller of the top section. Align key slot of the horizontal track with the Quick Install tab of the flag angle. Push curved portion of horizontal track down to lock in place.

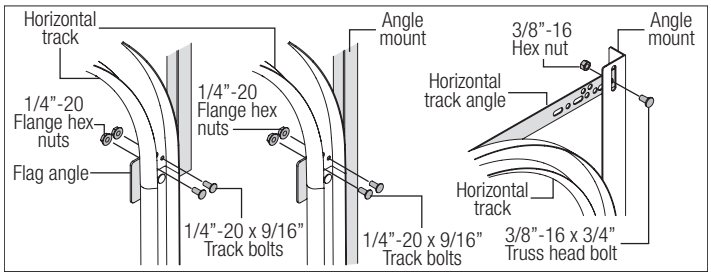


IF YOU HAVE FULLY ADJUSTABLE FLAG ANGLES: To install horizontal track, place the curved end over the top track roller of the top section. Align the bottom of the horizontal track with the top of the vertical track. If you have Quick Install horizontal track, tighten the horizontal track to the flag angle with a stud plate and (2) 1/4" - 20 flange hex nuts. If you have Universal horizontal track, tighten the horizontal track to the flag angle with (2) 1/4" - 20 x 9/16" track bolts and (2) 1/4" - 20 flange hex nuts.



IF YOU HAVE RIVETED TRACK ASSEMBLIES OR ANGLE MOUNT VERTICAL TRACK ASSEMBLIES: To install horizontal track, place the curved end over the top roller of the top section. Align the bottom of the horizontal track with the top of the vertical track. Tighten the horizontal track to the Flag Angle / Angle Mount with (2) 1/4" - 20 x 9/16" track bolts and (2) 1/4" - 20 flange hex nuts.





Next level the horizontal track assembly and bolt the horizontal track angle to the first encountered slot in the flag angle / angle mount using (1) 3/8" - 16 x 3/4" truss head bolt and (1) 3/8" - 16 hex nut. Repeat for other side. Next remove the nail that was temporarily holding the top section in place, installed in step, Top Section.

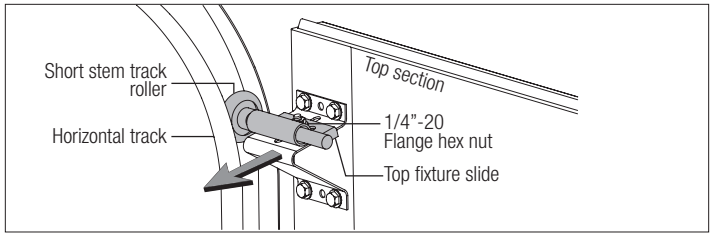
IMPORTANT: FAILURE TO REMOVE NAIL BEFORE ATTEMPTING TO RAISE DOOR COULD CAUSE PERMANENT DAMAGE TO TOP SECTION.

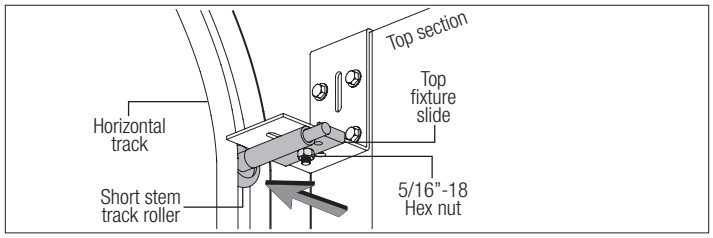
17 Adjusting Top Fixtures

Tools Required: 7/16" Wrench, Step ladder

NOTE: Depending on your door, you may have Top Fixture Bases and Top Fixture Slides or you may have Top Fixture Assemblies. Refer to Package Contents / Parts Breakdown, to determine which Top Fixtures you have.

With horizontal tracks installed, you can now adjust the top fixtures. Vertically align the top section of the door with the lower sections. Once aligned, position the top fixture slide, out against the horizontal track. Maintaining the slide's position, tighten the (2) 1/4" - 20 flange hex nuts or the (1) 5/16" - 18 hex nut to secure the top fixture slide to the top fixture base. Repeat for other side.





18 End Bearing Brackets

Tools Required: Step ladder, Power drill, 3/16" Drill bit, Ratchet wrench, 7/16" Socket driver, 9/16" Socket, 9/16" Wrench

NOTE: Refer to Package Contents / Parts Breakdown, to determine which End Bearing Brackets you have.

NOTE: Prior to fastening end bearing brackets into the door jamb, pilot drill using a 3/16" drill bit.

IMPORTANT: RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE BUILDING LOOKING OUT.

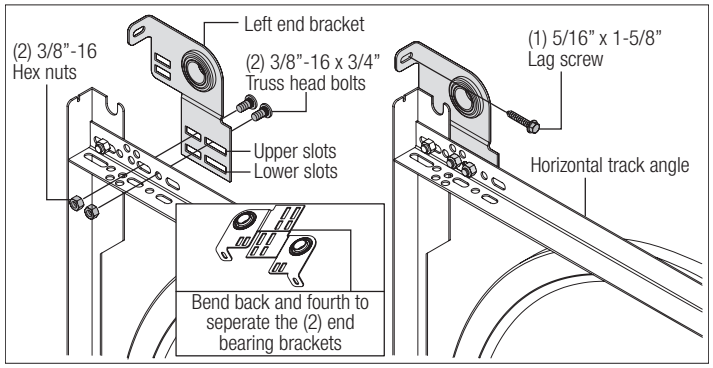
NOTE: Depending on your door's configuration you may have to break the end bearing brackets apart.

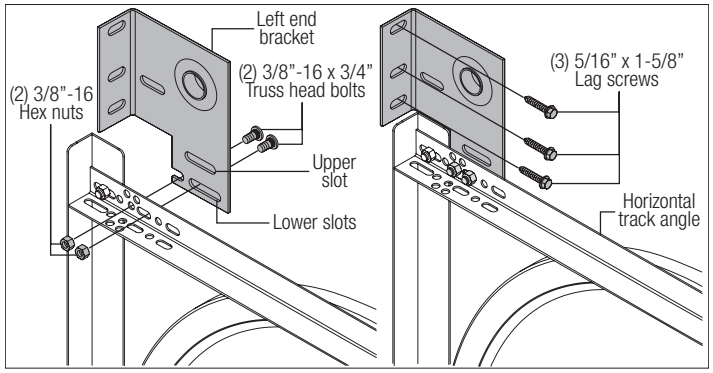
NOTE: End bearing brackets are right and left hand.

Attach the left hand end bearing bracket through either the end bearing bracket's upper or lower slots to the left hand horizontal track angle using (2) 3/8" - 16 x 3/4" truss head bolts and (2) 3/8" - 16 nuts.

IMPORTANT: THE END BEARING BRACKET'S LOWER SLOTS ARE USED ON DOORS WITH 12" RADIUS TRACK; THE UPPER SLOTS ARE USED ON DOORS WITH 15" RADIUS TRACK.

Secure the top of the end bearing bracket to the jamb using 5/16" x 1-5/8" lag screw(s). Repeat the same process for right hand side.


Left end bracket
(2) 3/8"-16 Hex nuts
(2) 3/8"-16 x 3/4" Truss head bolts
(1) 5/16" x 1-5/8" Lag screw
Upper slots
Lower slots
Horizontal track angle
Bend back and fourth to seperate the (2) end bearing brackets



19 Center Bracket

Tools Required: Step ladder, Power drill, 7/16" Socket driver, 3/16" Drill bit, 1/4" Torx bit, Level, Tape measure, Pencil

NOTE: Refer to Package Contents / Parts Breakdown, to determine which Center Bracket(s) came with your door.

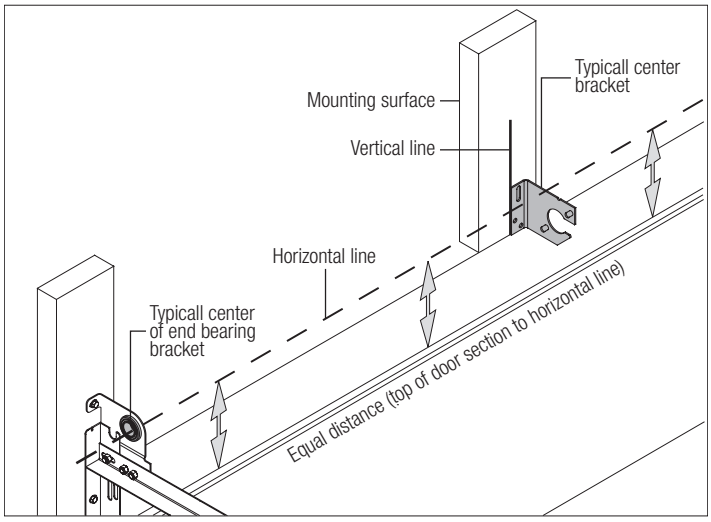
NOTE: Prior to fastening center bracket(s) into the door jamb, pilot drill using a 3/16" drill bit.

NOTE: Refer to Package Contents / Parts Breakdown, to determine if your door came with a coupler assembly. If your door came with a coupler assembly, the mounting surface needs to be a minimum of 17" wide. The two center bearing brackets will need to be spaced 12" to 14" apart at the center of the door, as shown.

NOTE: If your door came with (4) springs, each of the outer springs mounting surface will need to be a minimum of 3" wide.

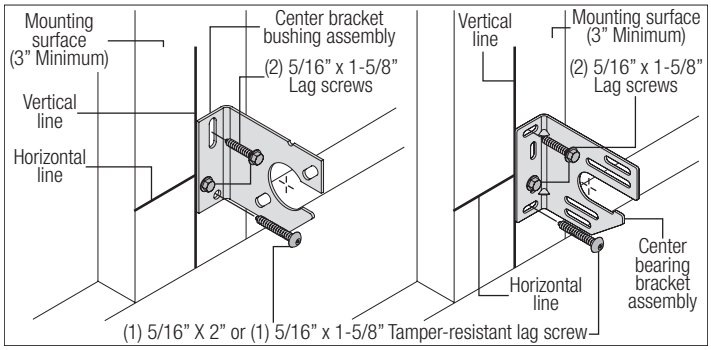
NOTE: If needed, measure the diameter of your springs. If you have a one piece shaft with 3-3/4" diameter springs, they do not share center brackets and do not have a coupler assembly.

First, locate the center of the door. Mark a vertical pencil line on the mounting surface above the door, at the center. Measure from the center of the bearing, in one of the end bearing brackets, downwards, to the top the door. Using that measurement, measure that distance upwards from the top of the door to the mounting surface and mark a horizontal pencil line which intersects the vertical pencil line.


Mounting surface
Typicall center bracket
Vertical line
Horizontal line
Typicall center of end bearing bracket
Equal distance (top of door section to horizontal line)

IF YOUR DOOR DID NOT COME WITH A CENTER COUPLER ASSEMBLY OR TORSION SPRINGS LESS THAN 3-3/4" ID: Mark a vertical pencil line on the mounting surface above the door, at the center. Align the edge of the center bracket with the vertical pencil line and the center of the center bracket with the horizontal pencil line; this is to ensure the torsion shaft is level between the center and end bearing brackets.

NOTE: On some single spring doors, the single spring can be longer than half the opening width. If your spring is longer, then the center bracket must be mounted off center for the spring to fit properly. Measure spring length to determine appropriate center bracket location.


Mounting surface (3" Minimum)
Center bracket bushing assembly
(2) 5/16" x 1-5/8" Lag screws
Vertical line
Horizontal line
Vertical line
Mounting surface (3" Minimum)
(2) 5/16" x 1-5/8" Lag screws
Center bearing bracket assembly
Horizontal line
(1) 5/16" X 2" or (1) 5/16" x 1-5/8" Tamper-resistant lag screw

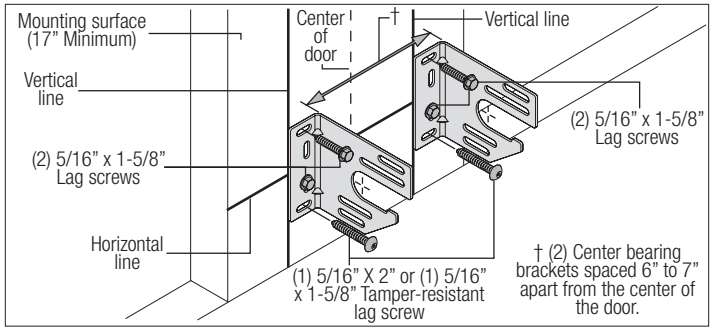
IF YOUR DOOR DID COME WITH A CENTER COUPLER ASSEMBLY OR 3-3/4" ID TORSION SPRINGS: Mark a vertical pencil line on the mounting surface above the door, at the center. Split the difference up and position the (2) center bearing brackets apart from each other. Mark two vertical pencil lines, one for each center bearing bracket onto the mounting surface above the door.

NOTE: If your door came with a center coupler assembly or if it utilizes 3-3/4" springs, the springs will not share a center bracket.

NOTE: If your door has (4) springs, split the distance between the center of the door and the end bracket on each side to locate the intermediate center brackets.

Attach each of the center bracket(s) to the mounting surface, using (2) 5/16" x 1-5/8" lag screws and (1) 5/16" x 2" tamper-resistant lag screw.

IMPORTANT: USE A 5/16" X 1-5/8" TAMPER-RESISTANT LAG SCREW INSTEAD OF THE 5/16" X 2" TAMPER-RESISTANT LAG SCREW IF MOUNTING SURFACE IS MOUNTED OVER MASONRY. TAMPER-RESISTANT LAG SCREW MUST BE ATTACHED THROUGH THE BOTTOM HOLE OF THE CENTER BRACKET(S).


Mounting surface (17" Minimum)
Vertical line
(2) 5/16" x 1-5/8" Lag screws
Horizontal line
Center of door
†
Vertical line
(2) 5/16" x 1-5/8" Lag screws
(1) 5/16" X 2" or (1) 5/16" x 1-5/8" Tamper-resistant lag screw
† (2) Center bearing brackets spaced 6" to 7" apart from the center of the door.

20 Torsion Spring Assembly

Tools Required: 3/8" Wrench, 9/16" Wrench, Step Ladder

NOTE: Refer to the Package Contents and or Parts Breakdown to determine if your door came with a coupler assembly.

IMPORTANT: RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE BUILDING LOOKING OUT.

IMPORTANT: Identify the torsion springs provided as either right hand wound (red winding cone), which goes on the LEFT HAND SIDE or left hand wound (black winding cone), which goes on the RIGHT HAND SIDE.

IMPORTANT: ON SINGLE SPRING APPLICATIONS, ONLY A LEFT HAND WOUND (BLACK WINDING CONE), WHICH GOES ON THE RIGHT HAND SIDE IS REQUIRED.

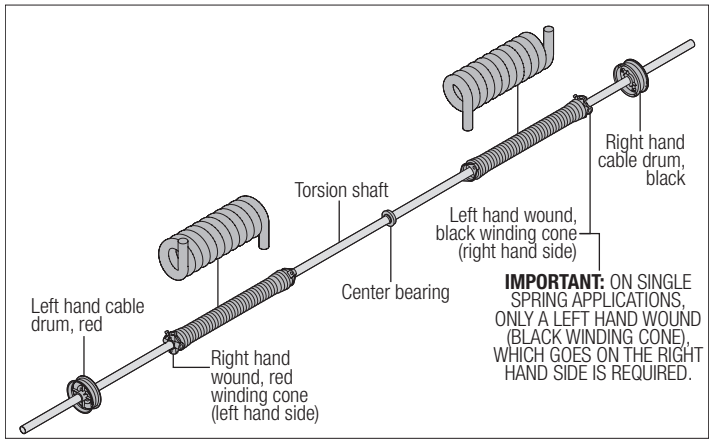
NOTE: The set screws used on all torsion winding cones and cable drums are now colored red. DO NOT identify right and left hand by the set screw color.

IF YOU DON'T HAVE A COUPLER ASSEMBLY:

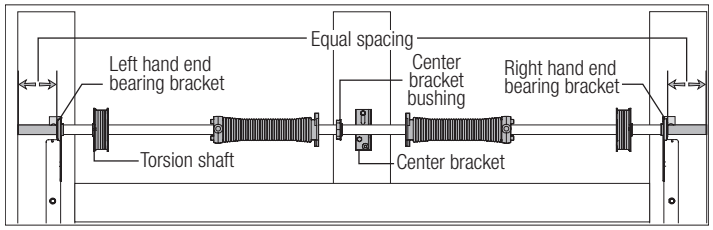
Facing the inside of the door, lay the torsion shaft / torsion keyed shaft on the floor. Lay the torsion spring with the black winding cone and the black cable drum at the right end of the torsion shaft / torsion keyed shaft. Lay the torsion spring with the red winding cone and the red cable drum at the left end of the torsion shaft / torsion keyed shaft.

Slide the center bracket bearing / center bracket bushing onto the torsion shaft / torsion keyed shaft followed by the torsion springs and cable drums.

IMPORTANT: THE CENTER BRACKET BEARING / CENTER BRACKET BUSHING, TORSION SPRINGS, AND CABLE DRUMS MUST BE POSITIONED, AS SHOWN.


Right hand cable drum, black
Torsion shaft
Left hand wound, black winding cone (right hand side)
Center bearing
IMPORTANT: ON SINGLE SPRING APPLICATIONS, ONLY A LEFT HAND WOUND (BLACK WINDING CONE), WHICH GOES ON THE RIGHT HAND SIDE IS REQUIRED.
Left hand cable drum, red
Right hand wound, red winding cone (left hand side)

With assistance, pick up the torsion spring assembly and slide one end of the torsion shaft / torsion keyed shaft through one end bearing bracket. Lay the middle of the torsion shaft / torsion keyed shaft into the center bracket. Slide the other end of the torsion shaft / torsion keyed shaft into the other end bearing bracket. Position the torsion shaft / torsion keyed shaft so that equal amounts of the shaft extend from each end bearing bracket.



IF YOU HAVE A COUPLER ASSEMBLY:

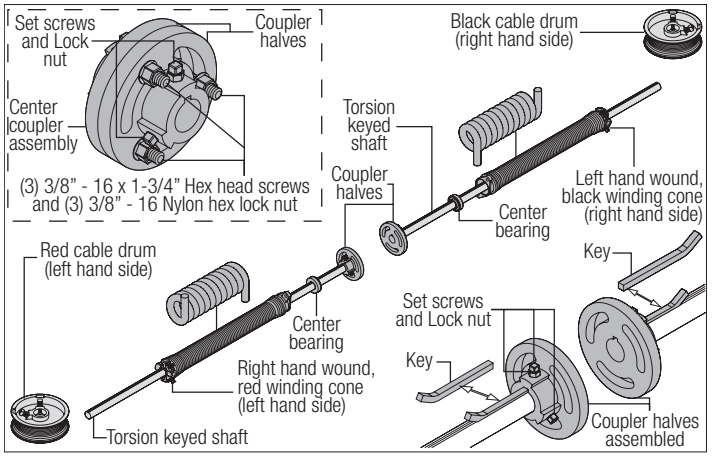
Disassemble the coupler assembly by removing the (3) 3/8" - 16 x 1-3/4" hex head screws and the (3) 3/8"-16 nylon hex lock nuts from the coupler halves. Loosen the set screws. Set the components aside. Facing the inside of the door, lay the (2) torsion keyed shafts on the floor. One torsion keyed shaft on the left hand side and the other torsion keyed shaft on the right hand side. Starting on the left hand side, lay one of the coupler halves, the center bearing, torsion spring with the red winding cone and the red cable drum at the left end of the torsion keyed shaft. Next on the right hand side, lay the other coupler half, center bearing, the torsion spring with the black winding cone, and the black cable drum at the right end of the torsion keyed shaft.

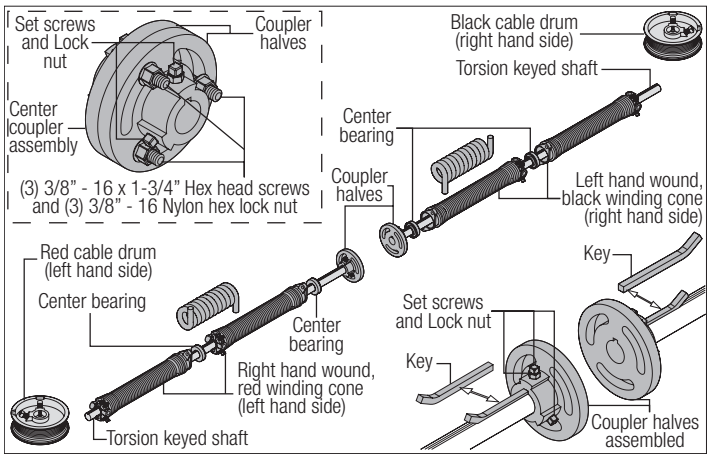
Slide the coupler halves, center bearings onto the torsion keyed shafts followed by the torsion springs and the cable drums, as shown.

IMPORTANT: THE COUPLER HALVES, CENTER BEARINGS, TORSION SPRINGS, CABLE DRUMS MUST BE POSITIONED, AS SHOWN.

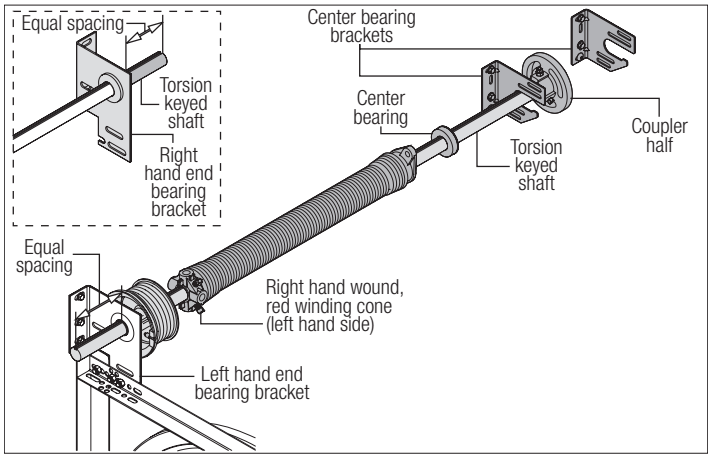
Slide the flat edge of the couple half flush with the side edge of the torsion keyed shaft. Insert (1) key into the slot of both the coupler half and the slot in the torsion keyed shaft. Tighten the (2) set screws and the locking nut to secure the coupler half to the torsion keyed shaft, as shown.

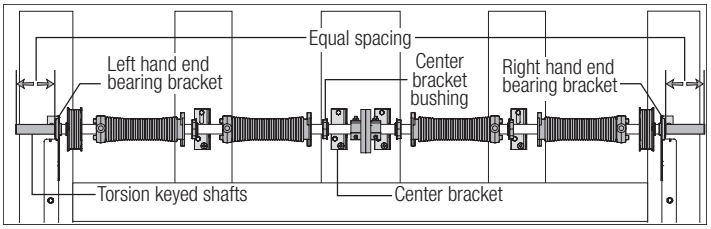
NOTE: Tighten the set screws to 14-15 ft. lbs. of torque (once set screws contact the shaft, tighten set screws one full turn). Repeat the same process for the other coupler half.


Set screws and Lock nut
Coupler halves
Black cable drum (right hand side)
Center coupler assembly
Torsion keyed shaft
Coupler halves
(3) 3/8" - 16 x 1-3/4" Hex head screws and (3) 3/8" - 16 Nylon hex lock nut
Left hand wound, black winding cone (right hand side)
Center bearing
Red cable drum (left hand side)
Key
Set screws and Lock nut
Center bearing
Key
Right hand wound, red winding cone (left hand side)
Torsion keyed shaft
Coupler halves assembled


Set screws and Lock nut
Coupler halves
Black cable drum (right hand side)
Torsion keyed shaft
Center coupler assembly
Center bearing
Coupler halves
(3) 3/8" - 16 x 1-3/4" Hex head screws and (3) 3/8" - 16 Nylon hex lock nut
Left hand wound, black winding cone (right hand side)
Red cable drum (left hand side)
Key
Center bearing
Center bearing
Set screws and Lock nut
Key
Right hand wound, red winding cone (left hand side)
Torsion keyed shaft
Coupler halves assembled

With assistance and starting on the left hand side of door, pick up the left hand torsion spring assembly and slide one end of the torsion keyed shaft through the end bearing bracket. Lay the other side of the torsion keyed shaft into the center bracket. Repeat the same process for the right hand torsion spring assembly. Position both torsion keyed shafts so that equal amounts of the shafts extend from each end bearing brackets.





21 Torsion Spring Attachment

Tools Required: Step Ladder, Ratchet Wrench, 9/16" Socket, 9/16" Wrench

NOTE: Refer to Package Contents / Parts Breakdown, to determine which Center Bracket(s) came with your door.

NOTE: Refer to Package Contents / Parts Breakdown, to determine if your door came with a coupler assembly.

IMPORTANT: THE SPRING WARNING TAG(S) SUPPLIED MUST BE SECURELY ATTACHED TO THE STATIONARY SPRING CONE(S) IN PLAIN VIEW. SHOULD A REPLACEMENT SPRING WARNING TAG BE REQUIRED, CONTACT WAYNE-DALTON FOR FREE REPLACEMENTS.

NOTE: Measure the diameter of your springs. If your spring diameter is 3-3/4", the springs do not share center brackets. If your spring diameter is either 2" or 2-5/8", then two springs will share the same center bracket, unless a coupler assembly is provided.

IF YOU DON'T HAVE A COUPLER ASSEMBLY:

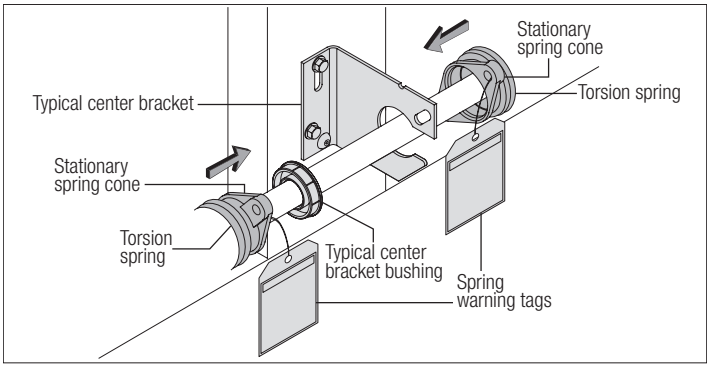
Slide center bracket bushing into the spring. Align the stationary spring cone(s) with the holes in the center bracket bushing assembly. Secure the torsion spring(s) to the center bracket bushing assembly with (2) 3/8" - 16 x 1-1/2" hex head bolts and (2) 3/8" - 16 nuts.

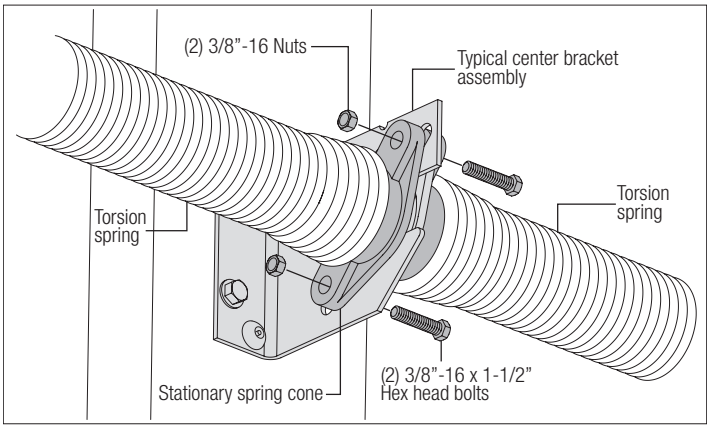
IF YOU HAVE A COUPLER ASSEMBLY:

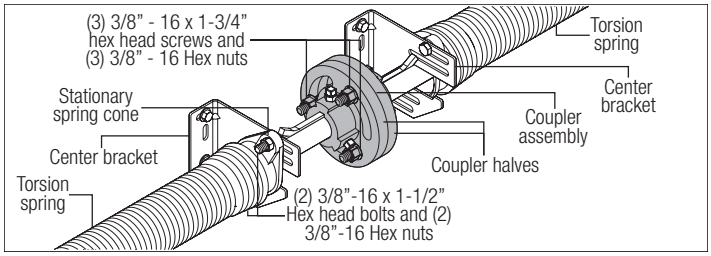
Slide center bracket bushing into the spring. Align the stationary spring cone with the holes in the center bracket. Secure the torsion spring to the center bracket with (2) 3/8"-16 x 1-1/2" hex head bolts and (2) 3/8" - 16 nuts. Repeat the same process for the other center bearing bracket.

At the middle of the two center bearing brackets, re-assemble the coupler assembly by loosely fastening the coupler halves together using the (3) 3/8" - 16 x 1-3/4" hex head screws and the (3) 3/8" - 16 nylon hex lock nuts, as shown.

NOTE: Ensure both torsion keyed shafts have equal amounts of the shafts extending from each end bearing bracket.






(3) 3/8" - 16 x 1-3/4" hex head screws and (3) 3/8" - 16 Hex nuts
Torsion spring
Center bracket
Stationary spring cone
Coupler assembly
Center bracket
Coupler halves
Torsion spring
(2) 3/8"-16 x 1-1/2" Hex head bolts and (2) 3/8"-16 Hex nuts

22 Counterbalance Lift Cables

Tools Required: Step Ladder, Locking Pliers, 3/8" Wrench

Starting on the left hand side, thread the counterbalance lift cable up and around the front side of the left hand cable drum.

IMPORTANT: VERIFY THAT THERE ARE NO COUNTERBALANCE LIFT CABLE OBSTRUCTIONS.

NOTE: Always assemble the left hand cable and cable drum first to help maintain equal cable tension on both sides of the door.

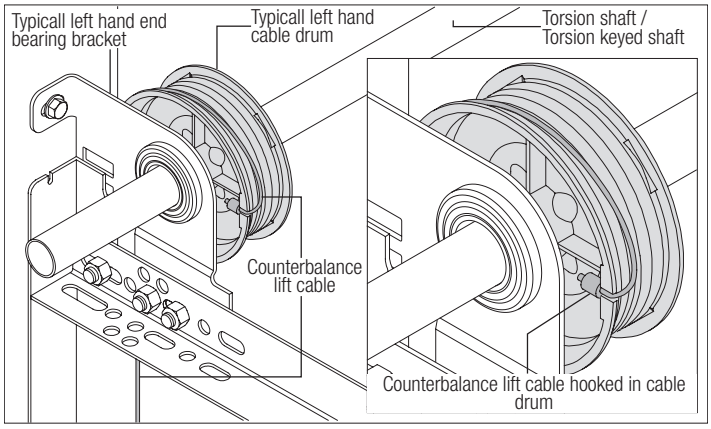
Hook the counterbalance lift cable into the left hand cable drum. Slide the left hand cable drum up against the left hand end bearing bracket. Counterbalance lift cable should terminate at the 3 o'clock position. Tighten the (2) set screws in the drum to 14-15 ft. lbs. of torque (once set screws contact the shaft, tighten screws one full turn).

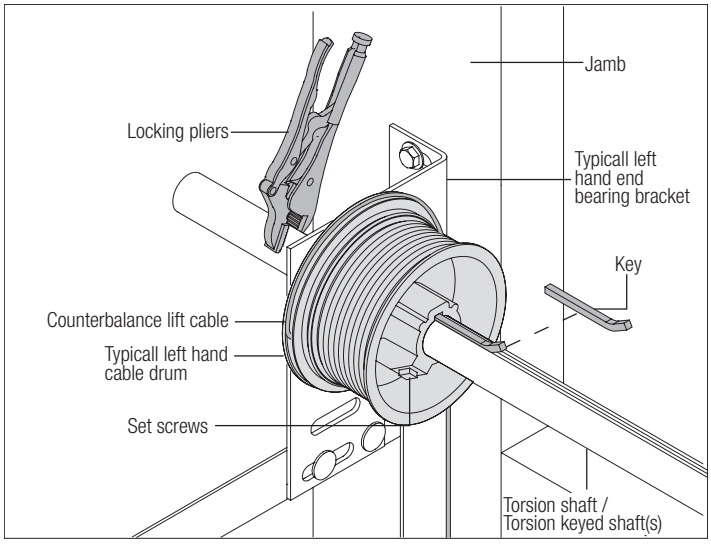
NOTE: If you have torsion keyed shaft(s), insert (1) key into the slot of both the cable drum and the slot in the torsion keyed shaft, as shown.

Rotate the left hand drum and torsion shaft until counterbalance lift cable is taut. Now attach locking pliers to the torsion shaft and brace locking pliers up against jamb to keep counterbalance lift cable taut. Repeat for right hand side.

IMPORTANT: INSPECT EACH COUNTERBALANCE LIFT CABLE MAKING SURE THEY ARE SEATED PROPERLY ONTO THE CABLE DRUMS AND THAT BOTH COUNTERBALANCE LIFT CABLES HAVE EQUAL TENSION.

Once the counterbalance cables are set and if applicable tighten the coupler assembly together by tightening the (3) 3/8" - 16 nylon hex lock nuts to secure the coupler halves together.

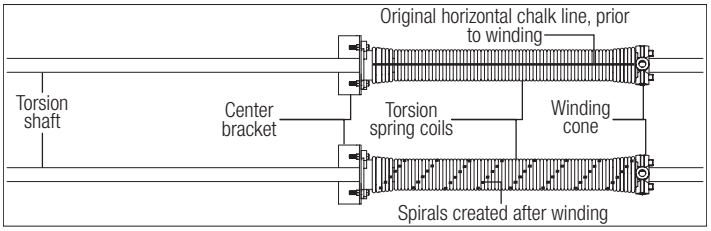

Typicall left hand end bearing bracket
Typicall left hand cable drum
Torsion shaft / Torsion keyed shaft
Counterbalance lift cable
Counterbalance lift cable hooked in cable drum



23 Chalking Torsion Spring(s)

Tools Required: Step Ladder, Chalk

Draw a chalk line horizontally along the center of the torsion spring coil(s). As the torsion spring is wound, the chalk line will create a spiral. This spiral can be used to count and determine the number of turns that are applied on the torsion spring.



24 Securing Door for Spring Winding

Tools Required: Vice Clamps

With the door in the fully closed position, place vice clamps / c-clamps onto both vertical tracks just above the third track roller. This is to prevent the garage door from rising while winding springs.

NOTE: Check the following before attempting to wind torsion spring(s):

a. Counterbalance lift cables are secured at bottom corner brackets.

b. Counterbalance lift cables are routed unobstructed to cable drums.

c. Counterbalance lift cables are correctly installed and wound onto cable lift drums.

d. Counterbalance lift cables are taut and have equal tension on both sides.

e. Cable lift drums are against end bearing brackets and set screws are tight.

f. Torsion spring or springs are installed correctly.

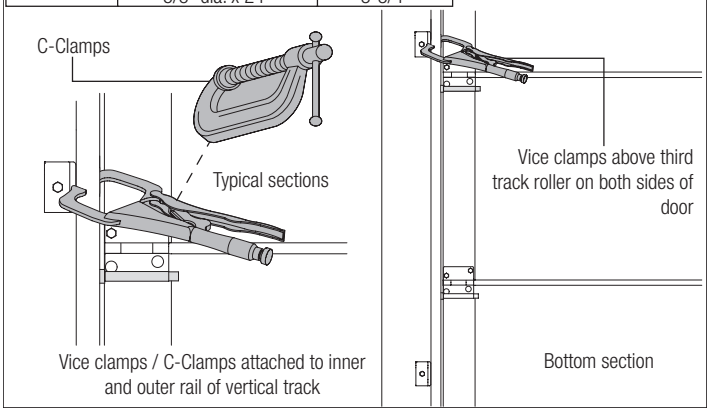
g. Review the label attached to the spring warning tag, to determine number of spring turns required.

NOTE: Door MUST be closed and locked when winding or making any adjustments to the torsion spring(s).

⚠ WARNING

FAILURE TO ENSURE DOOR IS IN A CLOSED POSITION AND TO PLACE VICE CLAMP ONTO VERTICAL TRACK CAN ALLOW DOOR TO RAISE AND CAUSE SEVERE OR FATAL INJURY.

Winding Bars (Steel Rods)	Size Of Winding Bar (Inches)	Spring Diameter Used On
▬	1/2" dia. x 18"	2" and 2-5/8"
	5/8" dia. x 24"	3-3/4"


C-Clamps
Typical sections
Vice clamps / C-Clamps attached to inner and outer rail of vertical track
Vice clamps above third track roller on both sides of door
Bottom section

25 Winding Spring(s)

Tools Required: Step Ladder, Approved winding bars, 3/8" Wrench, Leather gloves, Safety glasses

⚠ WARNING

WINDING TORSION SPRING(S) IS AN EXTREMELY DANGEROUS PROCEDURE AND SHOULD BE PERFORMED ONLY BY A TRAINED DOOR SYSTEM TECHNICIAN USING PROPER TOOLS AND INSTRUCTIONS.

⚠ WARNING

USE ONLY SPECIFIED WINDING BARS, AS STATED IN STEP SECURING DOOR FOR SPRING WINDING. DO NOT SUBSTITUTE WITH SCREWDRIVERS, PIPE, ETC. OTHER TOOLS MAY FAIL OR RELEASE FROM THE SPRING CONE AND CAUSE SERIOUS PERSONAL INJURY.

⚠ WARNING

PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY.

Position a ladder slightly to the side of the spring so that the winding cone is easily accessible, and so your body is not directly in line with the winding bars.

Check the label attached to the spring warning tag for the required number of complete turns to balance your door.

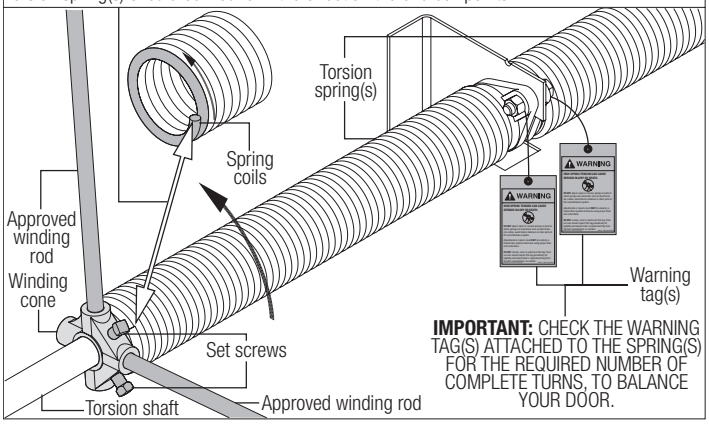
Door Height	Approximate Spring Turns
6'0"	6-7/8
6'3"	7-1/8
6'6"	7-1/4
6'8"	7-3/8
6'9"	7-1/2
7'0"	7-5/8
7'3"	7-7/8
7'6"	8
7'9"	8-1/4
8'0"	8-3/4

Alternately inserting the winding rods into the holes of the spring winding cone, rotate the winding cone upward toward the ceiling, 1/4 turn at a time, until the required number of complete turns for your door height is achieved. As the last 1/8 to 1/4 turn is achieved, securely hold the winding rod and carefully stretch the torsion spring 1/8" - 1/4". Next while still securely holding the winding rod, tighten both set screws in the winding cone to 14-15 ft. lbs. of torque (once set screws contact the torsion shaft, tighten screws one full turn).

Carefully remove winding rod from winding cone. Repeat for the opposite spring. While holding the door down to prevent it from raising unexpectedly in the event the spring(s) were over-wound, carefully remove the locking pliers from the torsion shaft and vertical tracks.

Adjustments to the number of turns stated may be necessary. If door rises off floor under spring tension alone, reduce spring tension until door rests on the floor. If the door is hard to rise or drifts down on its own, add spring tension.

Torsion spring(s) should be wound in the direction the end coil points.


Torsion spring(s)
Spring coils
Approved winding rod
Winding cone
Warning tag(s)
Set screws
Torsion shaft
Approved winding rod
IMPORTANT: CHECK THE WARNING TAG(S) ATTACHED TO THE SPRING(S) FOR THE REQUIRED NUMBER OF COMPLETE TURNS, TO BALANCE YOUR DOOR.

26 Rear Back Hangs

Tools Required: Ratchet wrench, Socket: 1/2" 5/8", Wrench: 1/2" 5/8", (2) Vice clamps, Tape measure, Level, Hammer, Step Ladder

IMPORTANT: HOLD THE DOOR DOWN TO PREVENT IT FROM RISING UNEXPECTEDLY IN THE EVENT THE SPRING(S) WAS OVER-WOUND AND CAUTIOUSLY REMOVE VICE CLAMPS FROM VERTICAL TRACKS.

Raise the door until the top section and half of the next section are in the horizontal track radius. Do not raise door any further since rear of horizontal tracks are not yet supported.

⚠ WARNING

RAISING DOOR FURTHER CAN RESULT IN DOOR FALLING AND CAUSE SEVERE OR FATAL INJURY.

Clamp a pair of vice clamps onto the vertical tracks just above the second track roller on one side, and just below the second track roller on the other side. This will prevent the door from raising or lowering while installing the rear back hangs.

Using the chart (Perforated Angle Gauge Weight Limitations) below, use the appropriate perforated angle (may not be supplied), (2) 5/16" x 1-5/8" hex head lag screws and (3) 5/16" bolts with nuts (may not be supplied), fabricate rear back hangs for the horizontal tracks. Attach the horizontal tracks to the rear back hangs with 5/16" - 18 x 1" hex bolts and nuts (may not be supplied). Horizontal tracks must be level and parallel with door within 3/4" to 7/8" maximum of door edge.

⚠ WARNING

EXCEEDING THE RECOMMENDED LISTED DOOR WEIGHT LIMITATIONS OF SPECIFIC GAUGE PERFORATED ANGLES MAY RESULT IN DOOR FALLING WHEN RAISED, CAUSING SEVERE OR FATAL INJURY.

⚠ WARNING

VERIFY PERFORATED BACK HANG ANGLE LOAD RATINGS WITH BACK HANG ANGLE SUPPLIER.

Perforated Angle Gauge Weight Limitations:	
Perforated Angle Gauge	Door Weight
2" x 2" x 12 Gauge	Door Weight Less Than 800 lbs.
1-1/4" x 1-1/4" x 13 Gauge	Door Weight Less Than 305 lbs.
1-1/4" x 1-1/4" x 15 Gauge	Door Weight Less Than 220 lbs.
1-1/4" x 1-1/4" x 16 Gauge	Door Weight Less Than 175 lbs.

NOTE: If an opener is installed, position horizontal tracks one hole above level when securing it to the rear back hangs.

⚠ WARNING

KEEP HORIZONTAL TRACKS PARALLEL AND WITHIN 3/4" TO 7/8" MAXIMUM OF DOOR EDGE, OTHERWISE DOOR COULD FALL, RESULTING IN SEVERE OR FATAL INJURY.

IMPORTANT: DO NOT SUPPORT THE WEIGHT OF THE DOOR ON ANY PART OF THE REAR BACK HANGS THAT CANTILEVERS 4" OR MORE BEYOND A SOUND FRAMING MEMBER.

NOTE: If rear back hangs are to be installed over drywall, use (2) 5/16" x 2" hex head lag screws and make sure lag screws engage into solid structural lumber.

NOTE: 26" angle must be attached to sound framing members and **nails should not be used**.

Now, permanently attach the weatherstrips on both door jambs and header. The weatherstrips were temporarily attached in Preparing the Opening, in the pre-installation section of this manual.

NOTE: When permanently attaching the weatherstrips to the jambs, avoid pushing the weatherstrips too tightly against the face of door.

⚠ WARNING

PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY.

Now, lift door and check its balance. Adjustments to the required number of spring turns stated may be necessary. If door rises off floor under spring tension alone, reduce spring tension until door rests on the floor. If the door is hard to rise or drifts down on its own, add spring tension. A poorly balanced door can cause garage door operator operation problems.

To adjust spring tension, fully close door. Apply vice grips to track above third track roller. Insert a winding rod into the winding cone. On single spring doors, counterbalance lift cable tension must be maintained by placing vice grips on torsion shaft before loosening set screws in the winding cone. Push upward on the winding rod while carefully loosening the set screws in the winding cone. BE PREPARED TO SUPPORT THE FULL FORCE OF THE TORSION SPRING ONCE THE SET SCREWS ARE LOOSE. Carefully adjust spring tension 1/4 turn. Retighten both set screws in the winding cone and repeat for the other side. Recheck door balance. DO NOT ADJUST MORE THAN 1/2 TURN FROM THE RECOMMENDED NUMBER OF TURNS.

If the door still does not operate easily, lower the door into the closed position, UNWIND THE SPRING(S) FULLY (Reference the insert "Removing The Old Door / Preparing The Opening" section on torsion spring removal) and recheck the following the items:

1.) Check the door for level.

2.) Check the torsion shaft for level.

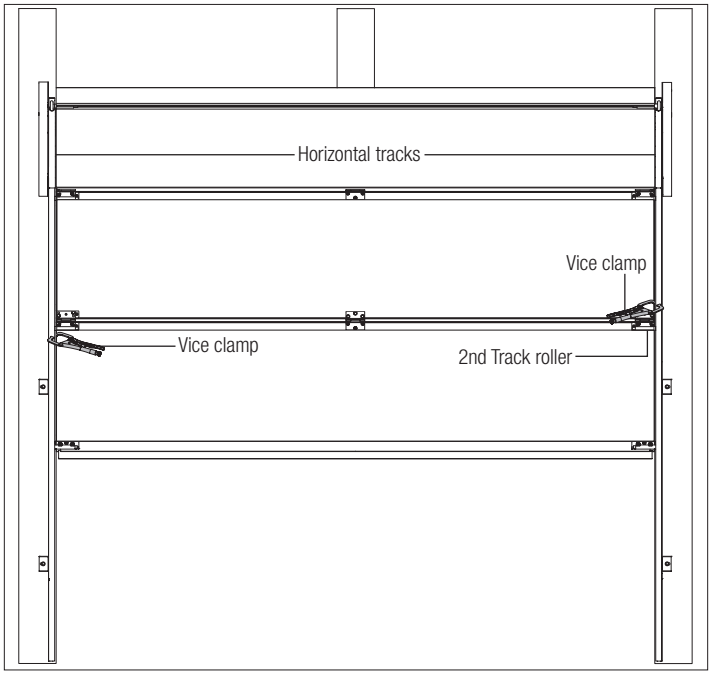
3.) Check the track spacing.

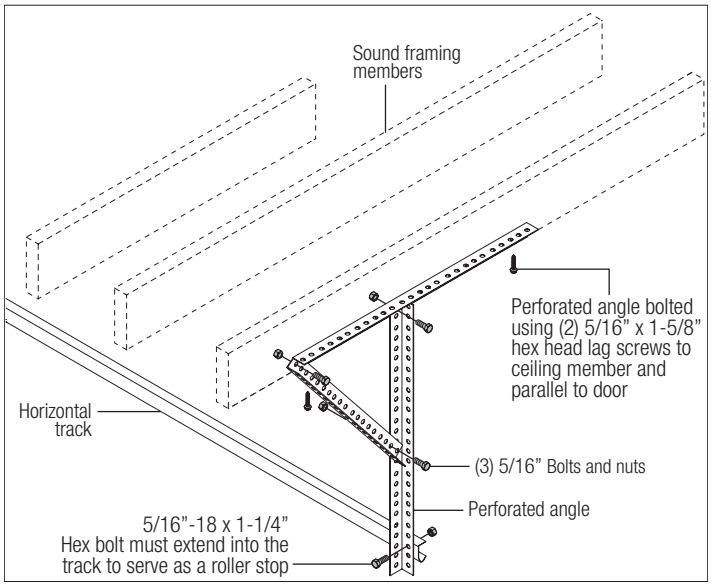
4.) Check the counterbalance cables for equal tension and proper wrap onto the cable drums.

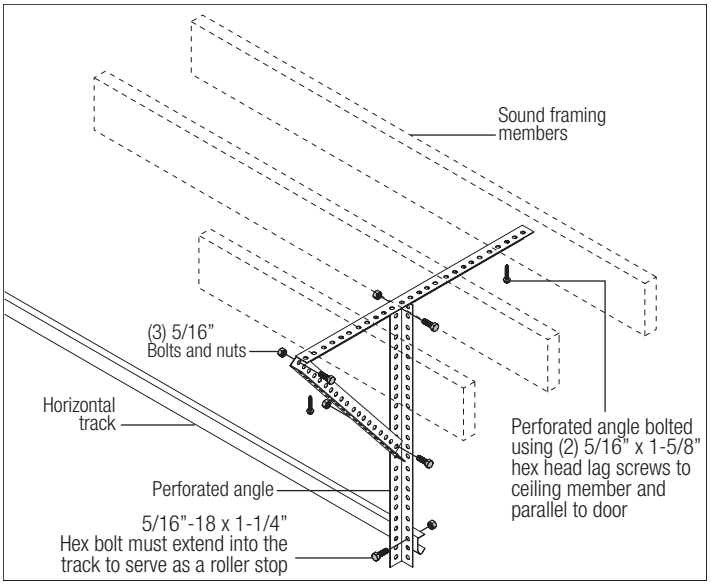
5.) Check the track for potential obstruction of the track rollers.

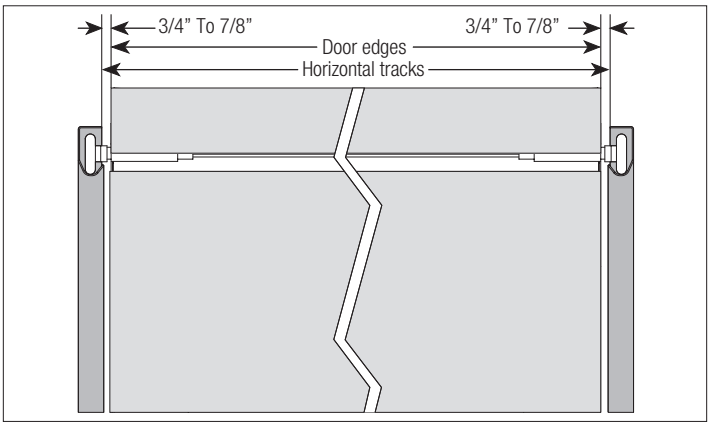
6.) Clamp locking pliers onto track and rewind springs.

IMPORTANT: IF DOOR STILL DOES NOT OPERATE PROPERLY, THEN CONTACT A TRAINED DOOR SYSTEM TECHNICIAN.




Sound framing members
Perforated angle bolted using (2) 5/16" x 1-5/8" hex head lag screws to ceiling member and parallel to door
Horizontal track
(3) 5/16" Bolts and nuts
Perforated angle
5/16"-18 x 1-1/4" Hex bolt must extend into the track to serve as a roller stop

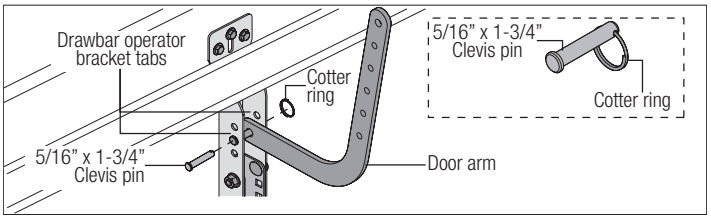

Sound framing members
(3) 5/16" Bolts and nuts
Horizontal track
Perforated angle
5/16"-18 x 1-1/4" Hex bolt must extend into the track to serve as a roller stop
Perforated angle bolted using (2) 5/16" x 1-5/8" hex head lag screws to ceiling member and parallel to door


3/4" To 7/8"
3/4" To 7/8"
Door edges
Horizontal tracks

Trolley Arm Hookup

NOTE: If Wayne-Dalton operator / trolley bracket was installed, follow these directions.

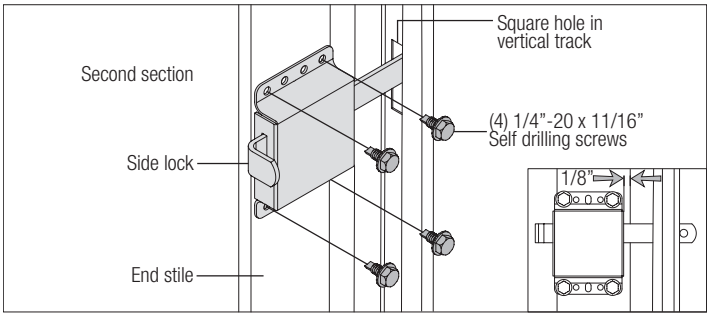
Align hole in the door arm with holes in operator bracket tabs, as shown. Attach with 5/16" x 1-3/4" cotter pin and cotter ring.



Inside Lock

Install the inside lock on the second section of the door. Secure the lock to the section with (4) 1/4" - 20 x 11/16" self drilling screws. Square the lock assembly with the door section, and align with the square hole in the vertical track. The inside lock should be spaced approximately 1/8" away from the section edge.

IMPORTANT: INSIDE LOCK(S) MUST BE REMOVED OR MADE INOPERATIVE IN THE UNLOCKED POSITION IF AN OPERATOR IS INSTALLED ON THIS DOOR.

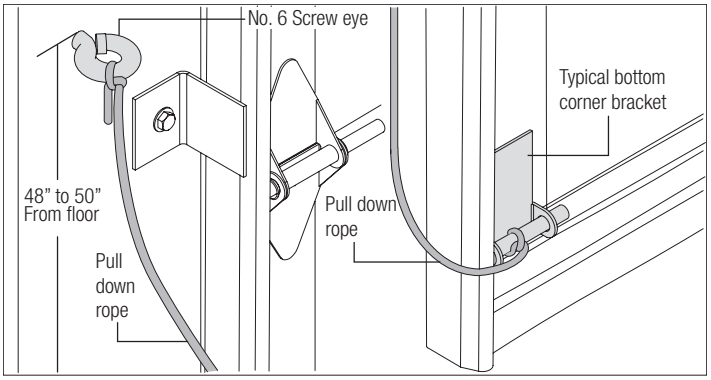


Pull Down Rope

⚠ WARNING

DO NOT INSTALL PULL DOWN ROPE ON DOORS WITH OPERATORS. CHILDREN MAY BECOME ENTANGLED IN THE ROPE CAUSING SEVERE OR FATAL INJURY.

Measure and mark the jamb approximately 48" to 50" (1220 to 1270 mm) from floor on the right or left side of jamb. Drill 1/8" pilot hole for no. 6 screw eye. Tie the pull down rope to the no. 6 screw eye and to the bottom corner bracket, as shown.



Cleaning Your Garage Door

IMPORTANT: DO NOT USE A PRESSURE WASHER ON YOUR GARAGE DOOR!

While factory-applied finishes on garage doors are durable, it is desirable to clean them on a routine basis. Some discoloration of the finish may occur when a door has been exposed to dirt-laden atmosphere for a period of time. Slight chalking may also occur as a result of direct exposure to sunlight.

Cleaning the door will generally restore the appearance of the finish. To maintain an aesthetically pleasing finish of the garage door, a periodic washing of the garage door is recommended.

THE FOLLOWING CLEANING SOLUTION IS RECOMMENDED:

A mild detergent solution consisting of one cup detergent (with less than 0.5% phosphate) dissolved into five gallons of warm water will aid in the removal of most dirt.

NOTE: The use of detergents containing greater than 0.5% phosphate is not recommended for use in general cleaning of garage doors.

NOTE: Be sure to clean behind weatherstrips on both sides and top of door.

⚠ **CAUTION:** NEVER MIX CLEANSERS OR DETERGENTS WITH BLEACH.

GLASS CLEANING INSTRUCTIONS

Clean with a mild detergent solution (same as above) and a soft cloth. After cleaning, rinse thoroughly.

ACRYLIC CLEANING INSTRUCTIONS

Clean acrylic glazing with nonabrasive soap or detergent and plenty of water. Use your bare hands to feel and dislodge any caked on particles. A soft, grit-free cloth, sponge or chamois may be used to wipe the surface. Do not use hard or rough cloths that will scratch the acrylic glazing. Dry glazing with a clean damp chamois.

NOTE: Do not use any window cleaning fluids, scouring compounds, gritty cloths or solvent-based cleaners of any kind.

Painting Your Garage Door

SURFACE PREPARATION FOR PAINTING

Wax on the surface must be removed or paint peeling/ flaking will result. To remove this wax, it will be necessary to lightly scuff the surface with a fine steel wool pad saturated with soapy water. A final wipe and rinse should be done with clean water only to remove any loose particles and any soapy film residue.

Surface scratches, which have not exposed the metal substrate, can be lightly buffed or sanded with 0000 steel wool or no. 400 sand paper to create a smoother surface. Care must be taken to not expose the substrate under the paint. Once the substrate is exposed, the likelihood for rusting is greatly increased.

If substrate is exposed, it must be treated to prevent rust from forming. Sand the exposed area lightly and paint with a high quality metal primer specifically intended for galvanized surfaces to protect the area from corrosion. Allow for drying time on primer can label before applying topcoat.

The surface of the factory-applied finish, that is being painted, must not be too smooth, or the paint will not adhere to it. It is advisable to test in an inconspicuous area, to evaluate adhesion. If poor adhesion is observed, surface preparation for painting the factory-applied finish must be repeated until desired results are achieved. Again, care must be taken to not expose the substrate under the paint.

PAINTING:

After surface has been properly prepared, it must be allowed to dry thoroughly, and then coated immediately with premium quality latex house paint. Follow paint label directions explicitly. Oil base or solvent base paints are not recommended. Please note that if substrate is exposed and not properly primed, painting with latex paint may cause accelerated rusting of the steel in the exposed area.

NOTES:

1. Re-painting of finish painted steel doors cannot be warranted, as this condition is totally beyond the door manufacturer's control.

2. Consult a professional coatings contractor if in doubt about any of the above directions.

3. Follow directions explicitly on the paint container labels for proper applications of coatings and disposal of containers. Pay particular attention to acceptable weather and temperature conditions in which to paint.

Operation And Maintenance

OPERATING YOUR GARAGE DOOR:

Before you begin, read all warning labels affixed to the door and the installation instructions and owner's manual. When correctly installed, your Wayne-Dalton door will operate smoothly. Always operate your door with controlled movements. Do not slam your door or throw your door into the open position, this may cause damage to the door or its components. If your door has an electric opener, refer to the owner's manual to disconnect the opener before performing manual door operation below.

Manual door operation:

For additional information on manual garage door operations go to **www.dasma.com** and reference TDS 165.

IMPORTANT: DO NOT PLACE FINGERS OR HANDS INTO SECTION JOINTS WHEN OPENING AND/OR CLOSING A DOOR. ALWAYS USE LIFT HANDLES / SUITABLE GRIPPING POINTS WHEN OPERATING THE DOOR MANUALLY.

Opening a Door: Make sure the lock(s) are in the unlocked position. Lift the door by using the lift handles / suitable gripping points only. Door should open with little resistance.

Closing a Door: From inside the garage, pull door downward using lift handles / gripping point only or a high friction area only. If you are unable to reach the lift handles/ suitable gripping points only, use pull down rope affixed to the side of door. Door should close completely with little resistance.

Using an electric operator:

IMPORTANT: PULL DOWN ROPES MUST BE REMOVED AND LOCKS MUST BE REMOVED OR MADE INOPERATIVE IN THE UNLOCKED POSITION.

When connecting a drawbar (trolley type) garage door operator to this door, an drawbar operator and or drawbar operator bracket must be securely attached to the top section of the door, along with any struts provided with the door. Always use the drawbar operator and or drawbar operator bracket supplied with the door. To avoid possible damage to your door, Wayne-Dalton recommends reinforcing the top section on models 8000, 8100, 8200 and 9100 doors with a strut (may or may not be supplied). The installation of the drawbar operator must be according to manufacturer's instructions and force settings must be adjusted properly. Refer to the owner's manual supplied with your drawbar operator for complete details on installation, operation, maintenance and testing of the operator.

Maintaining Your Garage Door:

Before you begin, read all warning labels affixed to the door and the installation instructions and owner's manual. Perform routine maintenance steps once a month, and have the door professionally inspected once a year. Review your Installation Instructions and Owner's Manual for the garage door. These instructions are available at no charge from Wayne-Dalton, A Division Of Overhead Door Corporation, P.O. Box 67, Mt. Hope, OH., 44660, or at **www.wayne-dalton.com**. For additional information on garage door/operator maintenance go to **www.dasma.com** and reference TDS 151, 167 and 179.

Monthly Inspections:

1. Visual Inspection: Closely inspect jambs, header and mounting surface. Any wood found not to be structurally sound must be replaced. Inspect the springs, counterbalance lift cables, track rollers, pulleys, rear back hangs and other door hardware for signs of worn or broken parts. Tighten any loose screws and/or bolts. Check exterior surface of the door sections for any minor cracks. Verify door has not shifted right or left in the opening. If you suspect problems, have a trained door system technician make the repairs.

⚠ WARNING

GARAGE DOOR SPRINGS, COUNTERBALANCE LIFT CABLES, BRACKETS, AND OTHER HARDWARE ATTACHED TO THE SPRINGS ARE UNDER EXTREME TENSION, AND IF HANDLED IMPROPERLY, CAN CAUSE SEVERE OR FATAL INJURY. ONLY A TRAINED DOOR SYSTEMS TECHNICIAN SHOULD ADJUST THEM, BY CAREFULLY FOLLOWING THE MANUFACTURER'S INSTRUCTIONS.

⚠ WARNING

NEVER REMOVE, ADJUST, OR LOOSEN THE BOLTS, SCREWS AND/OR LAG SCREWS ON THE COUNTERBALANCE (END OR CENTER BEARING BRACKETS) SYSTEM OR BOTTOM CORNER BRACKETS OF THE DOOR. THESE BRACKETS ARE CONNECTED TO THE SPRING(S) AND ARE UNDER EXTREME TENSION. TO AVOID POSSIBLE SEVERE OR FATAL INJURY, HAVE ANY SUCH WORK PERFORMED BY A TRAINED DOOR SYSTEMS TECHNICIAN USING PROPER TOOLS AND INSTRUCTIONS.

TorqueMaster® Plus Springs: Pawl knob(s) (located on the TorqueMaster® end brackets above the door) should be engaged to prevent the door from rapidly descending in case of spring failure or forceful manual operation.

Torsion Springs: The torsion springs (located above the door) should only be adjusted by a trained door systems technician. DO NOT attempt to repair or adjust torsion springs yourself.

Extension Springs: A restraining cable or other device should be installed on the extension spring (located above the horizontal tracks) to help contain the spring if it breaks.

2. Door Balance: Periodically test the balance of your door. If you have a garage door drawbar operator, use the release mechanism so you can operate the door by hand when doing this test. Start with the door in the fully closed position. Lift the door to check its balance. Adjust TorqueMaster® or Extension spring(s), if door lifts by itself (hard to pull down) or if door is difficult to lift (easy to pull down). DO NOT attempt to repair or adjust Torsion Springs yourself. To adjust TorqueMaster® or Extension spring(s), refer to your installation instructions

and owner's manual. If in question about any of the procedures, do not perform the work. Instead, have it adjusted by a trained door systems technician.

3. Lubrication: The door should open and close smoothly. Ensure the door track rollers are rotating freely when opening and closing the door. If track rollers do not rotate freely, clean the door tracks, removing dirt and any foreign substances. Clean and lubricate (use a non-silicon based lubricant) graduated end hinges, center hinge(s), steel track rollers, bearings and torsion spring(s) (torsion spring coil surfaces). DO NOT lubricate plastic idler bearings, nylon track rollers, door track. DO NOT oil a cylinder lock, if actuation is difficult use a graphite dust to lubricate.

Limited Warranty

Models 8300 and 8500

Wayne Dalton, a division of Overhead Door Corporation ("Seller") warrants to the original purchaser of the Models 8300 and 8500 ("Product"), subject to all of the terms and conditions hereof, that the Product and all components thereof will be free from defects in materials and workmanship for the following period(s) of time, measured from the date of installation:

Limited Lifetime Warranty* on the Product sections against:

- The Product becoming inoperable due to rust-through of the steel skin from the core of the Product section, due to cracking, splitting, or other deterioration of the steel skin, or due to structural failure caused by separation or degradation of the foam insulation.
- Peeling of the original paint as a result of a defect in the original paint or in the application of the original paint coating.
- The Product hardware and tracks (except springs).

ONE (1) YEAR on those component parts of the Product not covered by the preceding provisions of this Warranty.

Seller's obligation under this warranty is specifically limited to repairing or replacing, at its option, any part which is determined by Seller to be defective during the applicable warranty period. Any labor charges are excluded and will be the responsibility of the purchaser.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This warranty is made to the original purchaser of the Product only, and is not transferable or assignable. This warranty applies only to Product installed in a residential or other non-commercial application. It does not cover any Product installed in commercial or industrial building applications. This warranty does not apply to any unauthorized alteration or repair of the Product, or to any Product or component which has been damaged or deteriorated due to misuse, neglect, accident, failure to provide necessary maintenance, normal wear and tear, acts of God, or any other cause beyond the reasonable control of Seller or as a result of having been exposed to toxic or abrasive environments, including blowing sand, salt water, salt spray and toxic chemicals and fumes.

ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN TIME TO THE APPLICABLE WARRANTY PERIOD REFLECTED ABOVE. NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE LIMITED WARRANTY PERIOD HAS EXPIRED. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

IN NO EVENT SHALL SELLER BE RESPONSIBLE FOR, OR LIABLE TO ANYONE FOR, SPECIAL, INDIRECT, COLLATERAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES, even if Seller has been advised of the possibility of such damages. Such excluded damages include, but are not limited to, loss of use, cost of any substitute product, or other similar indirect financial loss. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Claims under this warranty must be made promptly after discovery, within the applicable warranty period, and in writing to the authorized distributor or installer whose name and address appear below. The purchaser must allow Seller a reasonable opportunity to inspect any Product claimed to be defective prior to removal or any alteration of its condition. Proof of the purchase and/or installation date, and identification as the original purchaser, may be required. There are no established informal dispute resolution procedures of the type described in the Magnuson-Moss Warranty Act.

- SELLER: _____
- SELLER'S ADDRESS: _____

_____

Thank you for your purchase.

PLEASE DO NOT RETURN THIS PRODUCT TO THE STORE

Please Do Not Return This Product To The Store. Please call 1-866-569-3799 (Press Option 1) and follow the prompts to contact the appropriate customer service agent. They will be happy to handle any questions that you may have.

AFTER INSTALLATION IS COMPLETE, FASTEN THIS MANUAL NEAR GARAGE DOOR FOR EASY REFERENCE.